SANYO

FILE NO.

Service Manual Supplement

Micro Component System DC-DA88 (SP)

The construction of the model DC-DA88/SP is similar to the model DC-DA90/SP. Please also refer to the original service manual DC-DA90/SP (SM5810260) for the items which do not appear in this supplement.

PARTS LIST

PAGE (DC-DA90)	SECTION	REF.NO	PART NO.(OLD) DC-DA90	PART NO.(NEW) DC-DA88	DESCRIPTION(OLD) DC-DA90	DESCRIPTION(NEW) DC-DA88
6	PACKING & ACCESSORIES					
		-	614 322 8554	614 325 9206	CARTON CASE	
		-	614 322 8806	614 325 9251	INSTRUCTION MANUAL	
		-	-	614 325 9916	-	INSTRUCTION SHEET
		-	645 041 1571	645 041 1588	POLY SHEET-0340X0280*NC,SET	
		-	-	645 042 3628	-	POLY BAG-0150X0500*NC,AC CORD
		-	614 320 8723	614 325 9473	ASSY,BOX,SPEAKER,SPEAKER(L,R)	
	CABINET & CHASSIS					
		1	614 319 8772	614 325 9039	COVER,DECK	
		3	614 319 8840	614 325 9145	LID,CASSETTE	
		7	614 320 8808	614 325 8964	ASSY,PANEL,FRONT	
		9	614 322 5591	614 325 9084	KNOB,DECK,MECHA,REC	
		10	614 322 5607	614 325 9091	KNOB,DECK,MECHA,PLAY	
		11	614 322 5614	614 325 9107	KNOB,DECK,MECHA,REW	
		12	614 322 5621	614 325 9114	KNOB,DECK,MECHA,FFWD	
		13	614 322 5638	614 325 9121	KNOB,DECK,MECHA,STOP/EJECT	
		14	614 322 5645	614 325 9138	KNOB,DECK,MECHA,PAUSE	
		16	614 319 8758	614 325 8988	BUTTON,FUNCTION,12 KEYS	
		18	614 307 2072	614 326 2480	COVER,PICK-UP	COVER,PICK-UP,MIC
		20	614 319 8864	614 325 9183	MOUNTING,CD	
		22	614 307 8821	614 326 2497	PULLEY	PULLEY,MIC
		26	614 319 8857	614 325 9152	LID,CD	
		27	614 319 8741	614 325 8971	BUTTON,POWER,1 KEY	
		30	614 322 8387	614 325 8940	ASSY,CABINET,REAR	
	FIXING PARTS					
		Y18	411 021 3404	411 021 3503	SCR S-TPG BIN 3X10,C-REAR+MTG CD	
	FRONT P.W.BOARD ASSY					
7		SE601	-	407 229 6101	-	PHOTO DIODE SPS-442-1-G1
	LED P.W.BOARD ASSY					
		D6951	408 037 0503	408 049 3707	LED SLP-3118C-51HAB-T1,LED	LED SLP-3G118C51HAB-T1
		D6952	408 037 0503	408 049 3707	LED SLP-3118C-51HAB-T1,LED	LED SLP-3G118C51HAB-T1
		D6953	408 037 0503	408 049 3707	LED SLP-3118C-51HAB-T1,LED	LED SLP-3G118C51HAB-T1
		D6954	408 037 0503	408 049 3707	LED SLP-3118C-51HAB-T1,LED	LED SLP-3G118C51HAB-T1
		D6955	408 037 0503	408 049 3707	LED SLP-3118C-51HAB-T1,LED	LED SLP-3G118C51HAB-T1
	CD P.W.BOARD ASSY					
		X1451	-	645 057 1145	-	OSC,CERAMIC 16.93MHZ
	TUNER P.W.BOARD ASSY					
8		XF212	-	645 054 1223	-	CERAMIC FILTER 10.70MHZ
	AMPLIFIER P.W.BOARD ASSY					
		C4714	-	403 377 6406	-	POLYESTER 0.15U J 50V
		C4814	-	403 377 6406	-	POLYESTER 0.15U J 50V
		C4918	-	403 377 6307	-	POLYESTER 1000P J 50V
		CN421	-	645 055 1017	-	JACK,PHONE D3.6,HEADPHONE
		S4901	-	645 052 2772	-	SWITCH,PUSH 2P-2TX2,POWERSW

Prod. Code : 129 620 12

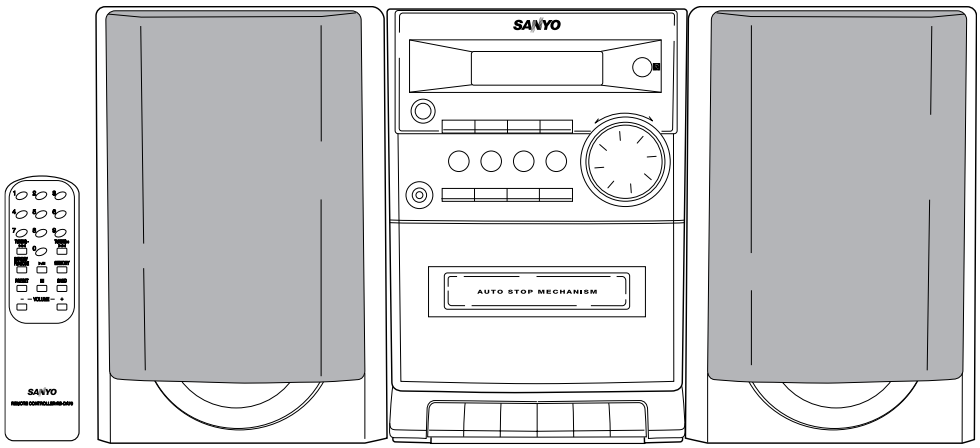
Dec. / '02 BB Printed in Japan

REFERENCE No. SS5810370

SANYO

FILE NO.

Service Manual — Micro Component System — DC-DA90 (SP)



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PRODUCT CODE No.
129 620 02

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SP: This service manual consists of "DC-DA90U/SP" (Main unit : 129 619 02) and "SX-DA90/SP" (Speaker system : 165 045 00).

REFERENCE No. SM5810260

SPECIFICATIONS

Tuner

Reception frequency ..... FM : 87.5 - 108.0 MHz
AM : 522 - 1611kHz

CD player

Channels ..... 2-channel stereo
Sampling frequency ..... 44.1 kHz
Pick-up ..... Optical 3-beam semiconductor laser
Laser output ..... 0.6mW(Continuous wave max.)
Wave length ..... 790 nm
Wow and Flutter ..... Below measurable limits

Cassette deck section

Track system ..... 4-track, 2-channel stereo
Frequency response ..... 80 Hz - 15 kHz
Signal to noise ratio ..... 40 dB
Wow and Flutter ..... 0.15% (WRMS)
Fast forward / Rewind time .... Approx. 110 sec. (C-60)

General

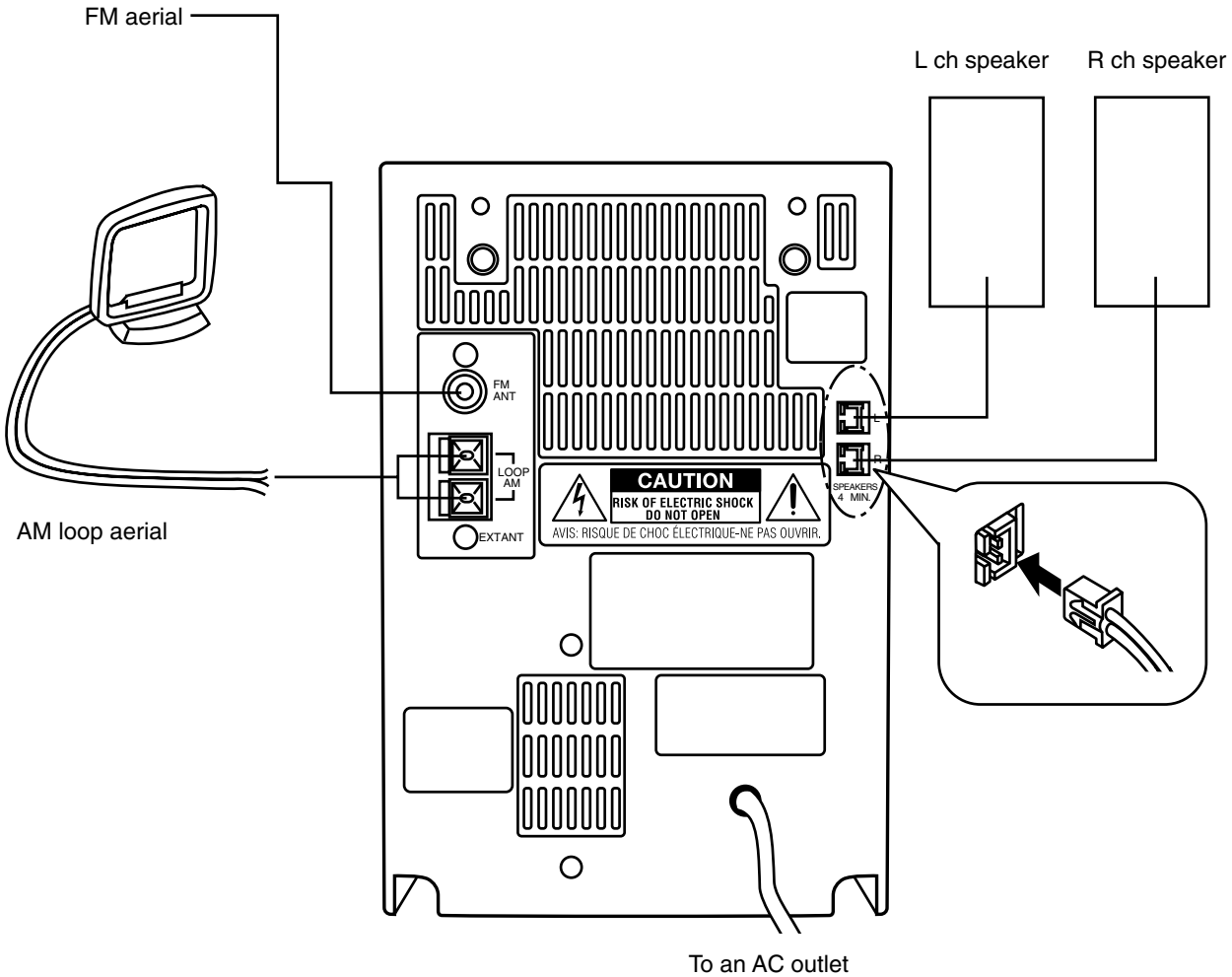
Output power ..... 4 W x 2 (at 4 ohms, 10% distortion)
Outputs ..... SPEAKERS : 4 ohms
PHONES : 8 - 32 ohms
Power requirements ..... AC 230V, 50Hz
Power consumption ..... 17 W
Dimensions (W x H x D) ..... Approx. 140 x 213 x 210 mm
Weight ..... Approx. 2.1 kg

Speaker system

Type ..... Full range bass reflex
Unit used ..... 8 cm cone type
Maximum power-handling capacity ..... 6 Watts (peak)
Nominal impedance ..... 4 ohms
Dimensions (W x H x D) ..... Approx. 140 x 210 x 170 mm
Weight ..... Approx. 1.1 kg (per speaker)

Specifications subject to change without notice.

SYSTEM CONNECTIONS



WHAT TO DO IF

If the operation of the unit or display is not normal,

1. Disconnect the mains lead.
2. Press the BAND button (main unit) for at least 30 seconds.
3. Connect the mains lead.
4. Operate the unit.

LASER BEAM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

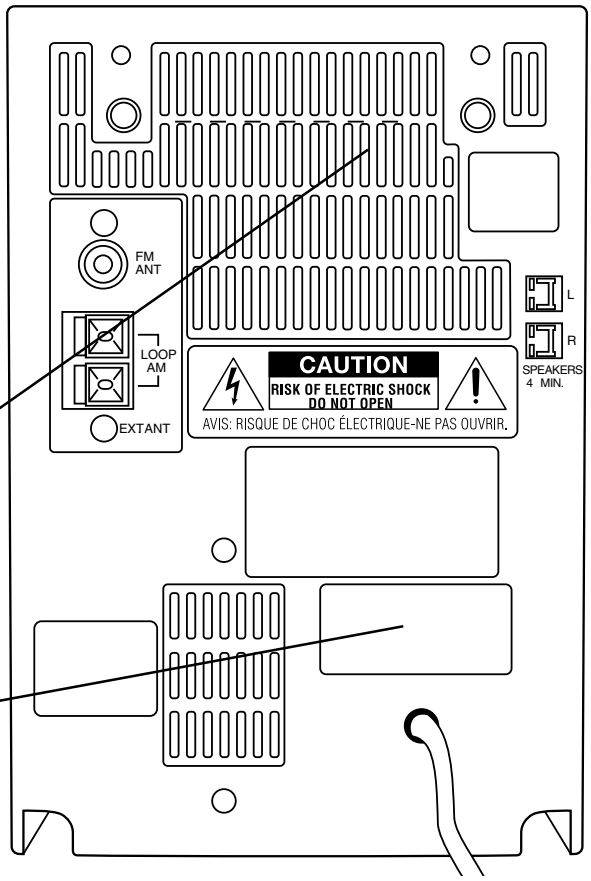
CAUTION :

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
THIS PRODUCT SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED PERSONNEL.

LASER OUTPUT ..... 0.6 mW Max. (CW)
WAVELENGTH ..... 790 nm

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT



CD PICK-UP MAINTENANCE

About pick-up (Optical lens) Cleaning

Clean a lens with swab of the cotton which moistened it with alcohol, cleaning paper or cleaning disc appointed.
Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.)

Show a clean procedure in the following in reference by swab of cotton.

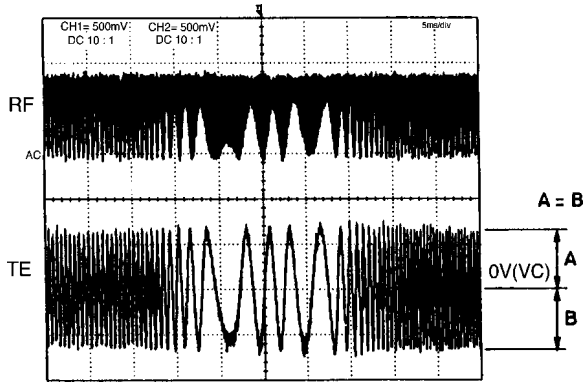
1. Cotton swab is wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

CD PLAYER ADJUSTMENTS

1. ADJUSTMENTS

(1) Confirm the tracking balance

1. Turn on the POWER switch.
2. Connect an Oscilloscope to TP2 (TE) and TP4 (VC).
3. Set the test disc.
4. Press "PLAY" button to turn into the "PLAY" mode.
5. Keep holding "SKIP" button down so as to be "SERCH" mode, then confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V (VC).

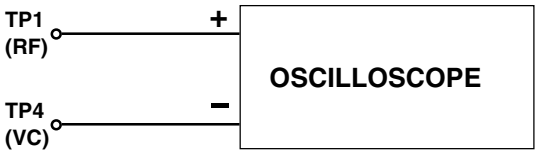


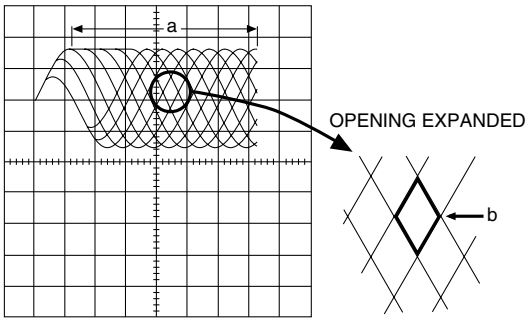
200mV/div.
5ms/div.

CD PLAYER ADJUSTMENTS

(2) Checking the "eye" pattern

1. Switch "ON" the POWER.
2. Connect an oscilloscope to TP1 (RF) and TP4 (VC).
3. Load the test disc.
4. Press the PLAY button.
5. Check to be sure that the "eye" pattern is at the center of waveform and that the diamond shape is clearly defined.
6. Press the STOP button.
7. Turn off the POWER switch.

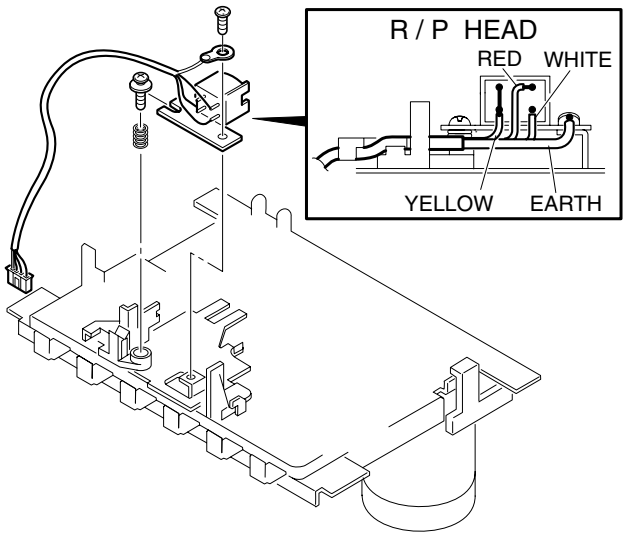




TAPE ADJUSTMENTS

a. Replacing the head

1. After replacement, demagnetize the heads by using a degausser.
2. Be sure to clean the heads before attempting to make any adjustments.
3. Be sure both channels (1 and 2) are the same level. (Using a dual-channels oscilloscope).
4. All wiring should be returned to the original position after work is completed.



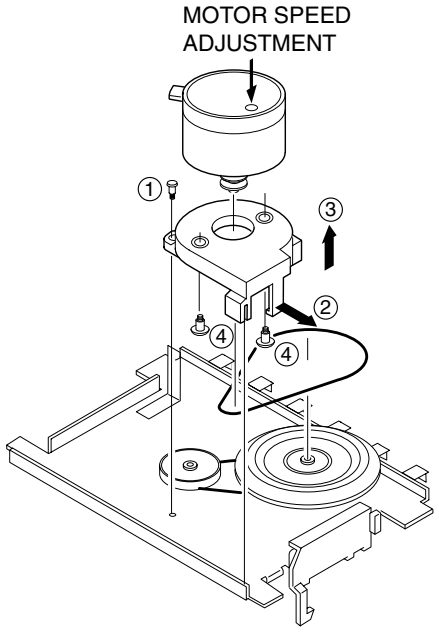
b. Adjusting head azimuth

1. Load a test tape (VTT-738, etc. :10kHz) for azimuth adjustment.
2. Press the PLAY button.
3. Use a cross-tip screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback.
4. Press the STOP button.

d. Replacing the moto

c. Adjusting motor speed

1. Insert the test tape (MTT-111 or etc. 3,000 Hz).
2. Press the PLAY button.
3. Use a flat-tip screwdriver to turn the SVR to adjust so that the frequency counter becomes 3,000 Hz.
4. Press the STOP button.



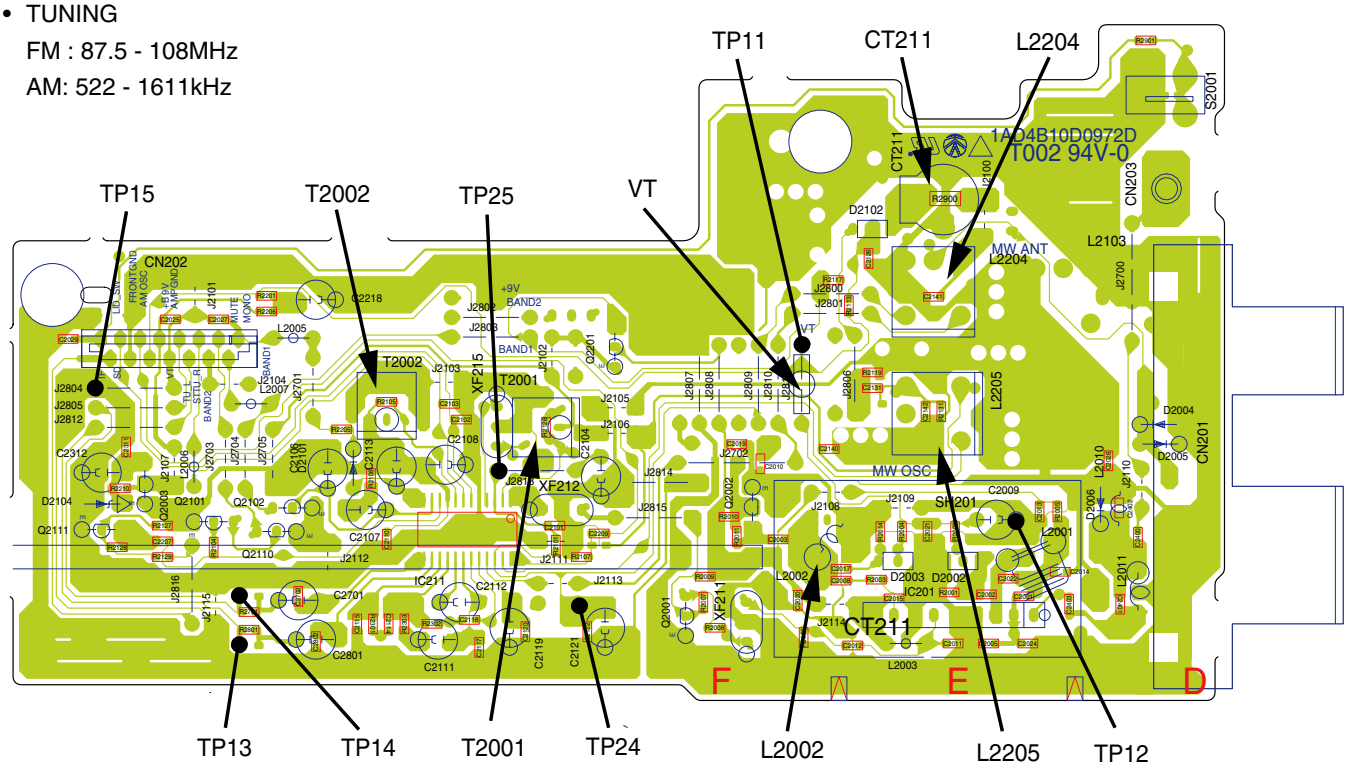
e. Checking the mechanism torques

- Clean the head, capstan and pinch roller before making any measurement.

Measurement	Take-up torque	Back tension	Tape tension
Cassette for measurement	PLAY : TW-2111A F.FWD/REW : TW-2231	PLAY : TW-2111A	Drive-power cassette TW-2412
PLAY	30 ~ 70gr.cm	1.0 ~ 6.0gr.cm	80 gr or more
F.FWD/REW	55 gr or more	-	-

TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 4 ohm
- TUNING
  FM : 87.5 - 108MHz
  AM: 522 - 1611kHz



Antenna : 75Ω unbalanced, Modulation : 1 KHz
Dev. : ±22.5kHz(MONO), ±22.5kHz(STEREO),±6.75kHz(PILOT)
RF Level : dBuV EMF, Output Level : about 30mV at TP13, TP14, TP15

1. FM

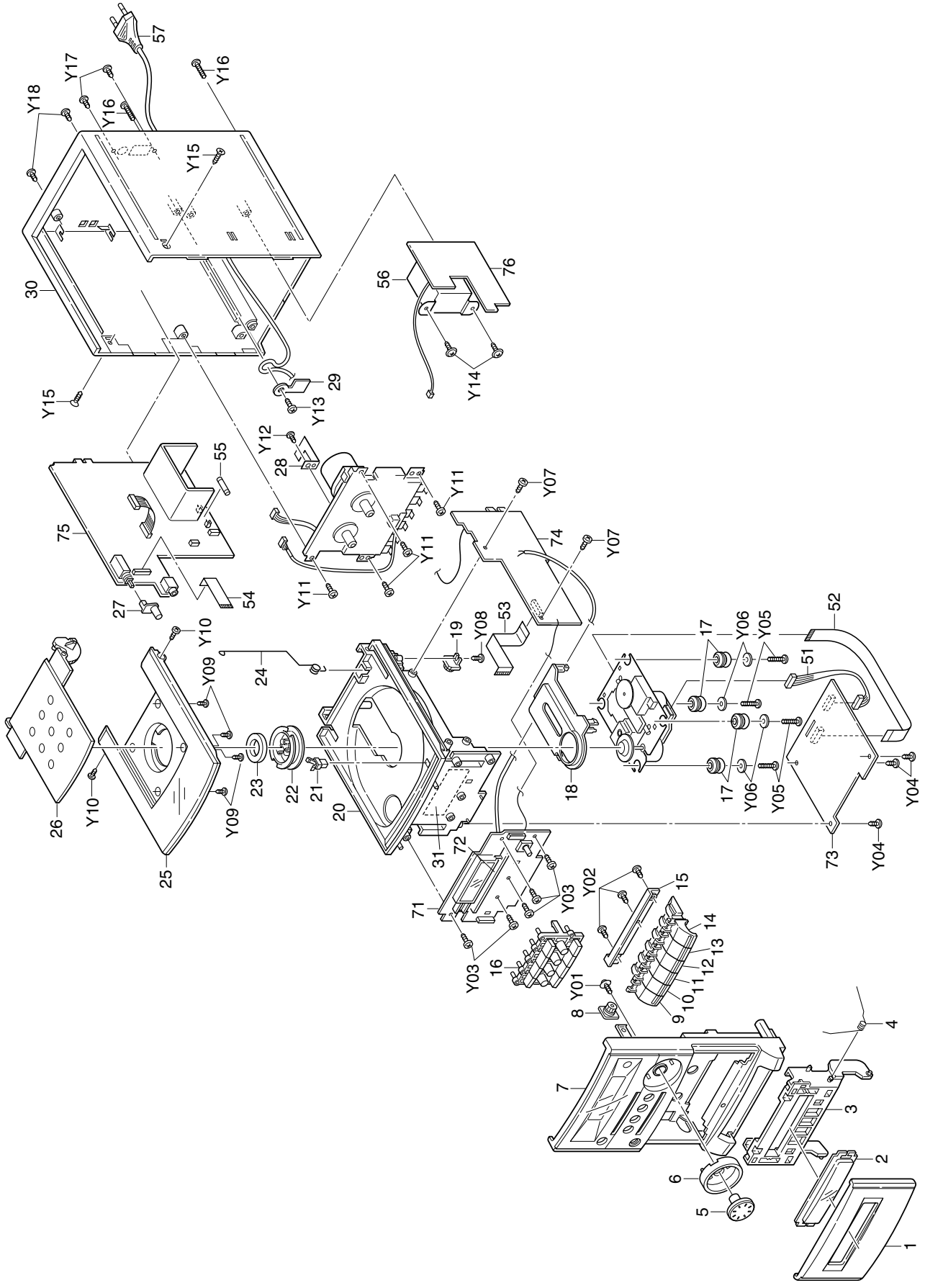
Step	Adjusting Circuit	Connection		SG Frequency	Adjustment	Remark
		Input	Output			
1	IF(0V) Adjustment	FM Antenna SG=66dBuV	Alignment voltage IC211 3-22pin(TP24,25) is 0.0±0.05V	98.0MHz	T2002	Alignment voltage IC211 3-22pin is 0.0±0.05V
2	Cover Voltage	---	Connect Digital DC voltmeter to TP11(H), TP12(E).	90.0MHz	L2002	1.00±0.05V
		---		108.0MHz		5.50±0.20V Check Only

Anntena : IRE Loop(SG), Moduration : 1kHz, 30%
RF Level : dBuV EMF, Output Level : about 30mV at TP13, TP14, TP15

2. AM

Step	Adjusting Circuit	Connection		SG Frequency	Adjustment	Remark
		Input	Output			
1	IF Adjustment	Loop Ant	Connect Sweep generator to test point TP13, TP14 and TP15.	450KHz at 999kHz	T2001	Maximum
2	Cover Voltage	---	Connect Digital DC voltmeter to TP11(H)and TP12(E).	522kHz	L2205	1.00±0.05V
		---		1611kHz		7.10±0.20V Check Only
3	Tracking	Loop Ant	Connect to VTVM point TP13 or TP14 and TP15.	603kHz	L2204	Maximum
				1404kHz	CT211	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W Carbon type and Chip type resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type, Electrical type and Chip type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 322 8554	CARTON CASE,
	614 319 8932	CUSHION,REAR
	614 319 8949	CUSHION,FRONT
	614 322 8806	INSTRUCTION MANUAL
	614 231 6832	LABEL,SAFETY,CLASS1
	645 041 1571	POLY SHEET-0340X0280*NC,SET
	645 005 1227	ASSY,ANTENA,LOOP
or	645 046 8322	ASSY,ANTENA,LOOP
	645 040 3217	REMOCON,RB-DA70
or	645 042 3604	REMOCON,RB-DA70
or	645 042 3611	REMOCON,RB-DA70
	614 312 2432	LID,BATTERY,SERVICE
	614 320 8723	ASSY,BOX,SPEAKER(L,R)

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 319 8772	COVER,DECK
2	614 319 8819	DEC,WINDOW,DECK
3	614 319 8840	LID,CASSETTE
4	614 319 8901	SPRING,DOOR DECK
5	614 319 8833	KNOB,VOLUME
6	614 319 8765	CAP,DECORATION
7	614 320 8808	ASSY,PANEL,FRONT
8	614 309 7969	ASSY,GEAR,LID,CASSETTE
9	614 322 5591	KNOB,DECK,MECHA,REC
10	614 322 5607	KNOB,DECK,MECHA,PLAY
11	614 322 5614	KNOB,DECK,MECHA,REW
12	614 322 5621	KNOB,DECK,MECHA,FFWD
13	614 322 5638	KNOB,DECK,MECHA,STOP/EJECT
14	614 322 5645	KNOB,DECK,MECHA,PAUSE
15	614 307 2270	MOUNTING,DECK,KNOB
16	614 319 8758	BUTTON,FUNCTION,12 KEYS
17	614 310 3899	SPACER,MECHA, MTG CD+CD MECHA
18	614 307 2072	COVER,PICK-UP
19	614 322 2132	ASSY,GEAR,LID,CD
20	614 319 8864	MOUNTING,CD
21	614 303 0263	LATCH,PUSH,CD,DOOR,LOCKING
22	614 307 8821	PULLEY
23	614 303 0256	LATCH,MAGNET
24	614 319 8918	SPRING,DOOR CD
25	614 319 8826	DEC,WINDOW,CD
26	614 319 8857	LID,CD
27	614 319 8741	BUTTON,POWER,1 KEY
28	614 308 0534	SPRING,REC
29	614 316 1172	STOPPER
30	614 322 8387	ASSY,CABINET,REAR
31	614 317 3090	LABEL,SAFETY,LASER,PICK-UP

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 020 8905	SCR S-TPG BRZ+FLG 3X10, F-PANEL+ASSY,GEAR
Y02	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+MTG DECK KNOB
Y03	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+FRONT PCB
Y04	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+CD PCB
Y05	411 021 1806	SCR S-TPG BIN 2.6X10, MTG CD+CD MECHA
Y06	411 092 0906	WASHER Z 2.6X10X0.5, MTG CD+CD MECHA
Y07	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+TUNER PCB
Y08	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+ASSY,GEAR
Y09	411 021 3107	SCR S-TPG BIN2.6X8, LID,CD+DEC,CD(SIDE
Y10	411 184 0906	SCR S-TPG BIN 2.3X10, LID,CD+DEC,CD(BACK
Y11	411 021 3503	SCR S-TPG BIN 3X10, REAR+DECK MECHA
Y12	411 126 1404	SCR S-TPG BIN 2X4, SPRING DECK REC
Y13	411 021 4005	SCR S-TPG BIN 3X12, REAR+STOPPER
Y14	411 020 9100	SCR S-TPG BRZ+FLG 3X12, REAR+P-TRANS
Y15	411 098 7800	SCR S-TPG FLT 3X12, C-REAR+MTG(L/R)
Y16	411 021 4500	SCR S-TPG BIN 3X16, C-REAR+F-PANEL
Y17	411 021 3503	SCR S-TPG BIN 3X10, C-REAR(ANT TERMINAL)
Y18	411 021 3404	SCR S-TPG BIN 3X10, C-REAR+MTG CD

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	614 314 4779	ASSY,WIRE
or	614 309 8454	ASSY,WIRE
52	614 310 5459	FLEXIBLE FLAT CABLE
or	614 313 7023	FLEXIBLE FLAT CABLE
53	614 316 3619	FLEXIBLE FLAT CABLE, FRONT TO TUNER
54	614 313 7047	FLEXIBLE FLAT CABLE, FRONT TO MAIN
or	614 310 6210	FLEXIBLE FLAT CABLE, FRONT TO MAIN
55	⚠ 423 016 7908	FUSE 250V 2.5A
56	⚠ 645 051 8775	TRANS,POWER
57	⚠ 645 016 9939	CORD,POWER-1.74MK

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 321 5196	ASSY,PWB,FRONT (Only initial)
BR601	614 321 2508	HOLDER,LCD,HOLDER_LCD
C6200	403 259 0508	NP-ELECT 1U M 50V
or	403 373 7001	NP-ELECT 1U M 50V
CN601	645 012 5096	SOCKET,FPC 12P,FRONT-AMP
CN602	614 016 8464	PLUG,FRONT-LED

REF.NO.	PART NO.	DESCRIPTION
CN603	645 012 5485	SOCKET,FPC 15P,FRONT-TU
D6901	407 012 4406	DIODE 1SS133
D6902	407 012 4406	DIODE 1SS133
IC601	409 504 4802	IC LC72336-9A38,MICON
L6900	645 001 4550	INDUCTOR,10U K
L6901	645 002 1459	INDUCTOR,22U K
LCD60	645 043 6260	LCD
LS601	614 309 4180	DEC,SHEET,LCD,DEC_LCD_SHEET
Q6200	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q6201	405 143 8706	TR KTC3199-GR
or	405 011 8500	TR 2SC1740S-R
or	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
S6001	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6002	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6003	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	645 048 3820	SWITCH,PUSH
S6004	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6005	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6006	645 048 3820	SWITCH,PUSH
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6007	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6008	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6009	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
or	645 048 3820	SWITCH,PUSH
S6010	614 220 5471	SWITCH,TACT
or	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
S6011	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6012	645 048 3820	SWITCH,PUSH
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6500	645 043 6253	SWITCH,ROTARY(ENCODER), SWITCH_ROTARY
SE601	407 217 1101	PHOTO DIODE SPS-442-1G
X6001	645 052 6206	OSC,CRYSTAL 4.5MHZ

LED P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 321 3185	ASSY,PWB,LED (Only initial)
D6951	408 037 0503	LED SLP-3118C-51HAB-T1,LED
D6952	408 037 0503	LED SLP-3118C-51HAB-T1,LED
D6953	408 037 0503	LED SLP-3118C-51HAB-T1,LED
D6954	408 037 0503	LED SLP-3118C-51HAB-T1,LED
D6955	408 037 0503	LED SLP-3118C-51HAB-T1,LED

CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 320 0482	ASSY,PWB,CD (Only initial)
CN111	645 040 0513	SOCKET,FPC 15P
or	645 026 2463	SOCKET,FFC 15P
CN113	645 005 8127	PLUG,6P,BASE MECHA
or	614 310 2472	PLUG,6P,BASE MECHA
CN122	645 005 8134	PLUG,8P
or	614 310 2496	PLUG,8P
D1402	407 099 5204	ZENER DIODE MTZJ5.1B
D1403	⚠ 407 004 9709	DIODE DSK10C
D1404	407 012 4406	DIODE 1SS133
D1410	⚠ 407 098 3300	DIODE RL153-BF-S2
IC101	409 396 8100	IC LA9241ML
IC102	409 435 2106	IC LC78622NE
IC103	⚠ 409 486 8706	IC MM1469XH
L1451	645 001 4550	INDUCTOR,10U K
PR140	⚠ 645 014 2499	PROTECTOR,0.4A 125V
Q1301	405 008 7103	TR 2SB808-G-SPA
or	405 008 6809	TR 2SB808-F-SPA
or	405 151 4509	TR KTA1270-Y
or	405 151 4608	TR KTA1270-O
Q1401	⚠ 405 009 5207	TR 2SB927-S
or	⚠ 405 001 9302	TR 2SA1020-Y
or	⚠ 405 158 2201	TR KTA1282
or	⚠ 405 141 3604	TR KTA1273-Y
X1451	614 231 2667	RESONATOR

TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 321 5202	ASSY,PWB,TUNER (Only initial)
C2900	614 130 4298	TUBE
CN201	645 038 7715	TERMINAL
or	645 025 4703	TERMINAL,ANTENNA
CN202	645 012 5195	SOCKET,FPC 15P
CN203	614 221 8273	TERMINAL
CT211	645 032 5663	TRIMMER,7PF
D2002	407 157 8109	VARACTOR DI SVC211-B
D2003	407 157 8109	VARACTOR DI SVC211-B
D2004	407 012 4406	DIODE 1SS133
D2005	407 012 4406	DIODE 1SS133
D2006	407 012 4406	DIODE 1SS133
D2101	407 012 4406	DIODE 1SS133
D2102	407 105 1305	VARACTOR DI SVC342L-V
or	407 105 1602	VARACTOR DI SVC342M-V
D2104	407 099 5303	ZENER DIODE MTZJ5.6B
IC201	409 016 0200	IC LA1186N-AUDIO
IC211	409 474 3201	IC LA1844ML
L2001	645 040 2753	INDUCTOR,AIR —
L2002	645 040 2746	COIL,AIR —
L2003	645 002 1534	INDUCTOR,8.2U K
L2005	645 002 1459	INDUCTOR,22U K
L2006	645 002 1459	INDUCTOR,22U K
L2007	645 002 1459	INDUCTOR,22U K
L2010	645 040 2760	INDUCTOR,AIR —
L2011	645 041 1328	INDUCTOR,AIR —
L2204	645 037 2377	TRANS,ANT,796KHZ
L2205	645 040 2739	TRANS,OSC,796KHZ
Q2001	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2002	405 151 4301	TR KTC3195-Y
or	405 151 4806	TR KTC3195-O

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
Q2003	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q2101	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
Q2102	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q2110	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q2111	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2201	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
S2001	645 023 5795	SWITCH,LEVER
SH201	614 256 3052	SHIELD
T2001	645 043 0213	FILTER,450KHZ
T2002	645 040 9981	TRANS,IF 10.7MHZ
or	645 039 9923	TRANS,IF 10.7MHZ
XF211	645 010 7665	CERAMIC FILTER 10.70MHZ
or	645 010 0079	CERAMIC FILTER 10.70MHZ
XF212	645 010 0079	CERAMIC FILTER 10.70MHZ
or	645 010 7665	CERAMIC FILTER 10.70MHZ
XF215	645 041 9324	CERAMIC FILTER 450KHZ

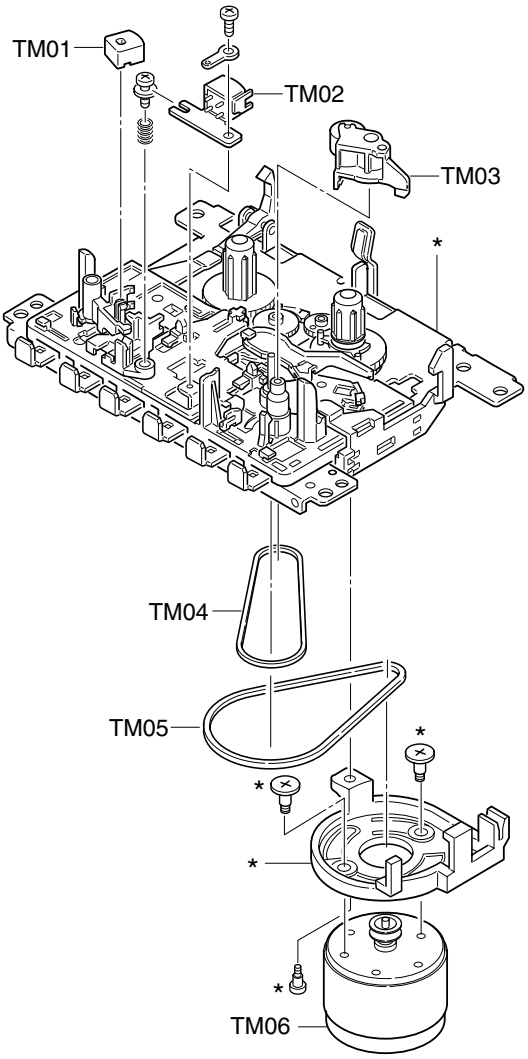
AMPLIFIER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 320 0468	ASSY,PWB,AMP (Only initial)
C4714	403 058 4608	POLYESTER 0.15U J 50V
C4814	403 058 4608	POLYESTER 0.15U J 50V
C4913	403 329 5907	ELECT 3300U M 25V
or	403 350 9301	ELECT 3300U M 25V
C4918	403 056 7502	POLYESTER 1000P J 50V
CN401	645 006 1875	PLUG,2P,SPEAKER
CN402	645 006 1875	PLUG,2P,SPEAKER
CN405	614 310 2755	PLUG,4P
or	645 004 2904	PLUG,4P
CN406	614 310 2458	PLUG,4P
or	645 005 8110	PLUG,4P
CN421	645 011 6384	JACK,PHONE D3.6,HEADPHONE
CN441	614 310 2731	PLUG,2P,POWER
or	645 004 2881	PLUG,2P,POWER
CN490	645 012 2736	SOCKET,DIP 8P
CN491	645 012 5096	SOCKET,FPC 12P
CN492	614 309 8812	ASSY,WIRE
or	614 314 4809	ASSY,WIRE
D4102	407 012 4406	DIODE 1SS133
D4951	⚠ 407 099 6003	ZENER DIODE MTZJ9.1B
D4953	407 012 4406	DIODE 1SS133
D4961	407 012 4406	DIODE 1SS133
D4962	407 012 4406	DIODE 1SS133
D4963	407 012 4406	DIODE 1SS133
D4964	407 012 4406	DIODE 1SS133
D4980	⚠ 407 098 3300	DIODE RL153-BF-S2
D4981	⚠ 407 098 3300	DIODE RL153-BF-S2
D4982	⚠ 407 098 3300	DIODE RL153-BF-S2
D4983	⚠ 407 098 3300	DIODE RL153-BF-S2
FCL41	⚠ 645 006 4760	HOLDER,FUSE
or	⚠ 645 031 7903	HOLDER,FUSE
FCL42	⚠ 645 006 4760	HOLDER,FUSE
or	⚠ 645 031 7903	HOLDER,FUSE
HS401	614 307 9866	HEAT SINK
IC410	409 384 3506	IC BA3314F
IC411	409 390 1107	IC LC75392
IC412	⚠ 409 295 7402	IC TA8229K
L4781	645 051 8263	INDUCTOR,80U
or	645 041 3094	INDUCTOR,80U
or	645 006 9864	INDUCTOR,80U
L4881	645 006 9864	INDUCTOR,80U
or	645 041 3094	INDUCTOR,80U
or	645 051 8263	INDUCTOR,80U
L4902	645 031 5893	TRANS,OSC,85KHZ,O.S.C
LG401	645 006 4432	FIXER
PR495	⚠ 645 014 2529	PROTECTOR,1.25A 125V
PR496	⚠ 645 014 2536	PROTECTOR,1.5A 125V
Q4103	405 000 0508	TR DTA114ES
or	405 110 5400	TR KRA102M-A
Q4104	405 000 3103	TR DTC114ES
or	405 109 9204	TR KRC102M-A
Q4106	405 000 3103	TR DTC114ES
or	405 109 9204	TR KRC102M-A
Q4108	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4109	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4730	405 143 6504	TR KTA1267-GR
or	405 004 4601	TR 2SA608-F-SPA
or	405 004 5103	TR 2SA608-G-SPA
or	405 006 1806	TR 2SA933S-R
or	405 006 1905	TR 2SA933S-S
Q4740	405 000 3103	TR DTC114ES
or	405 109 9204	TR KRC102M-A
Q4751	405 151 4400	TR KTD1303
or	405 021 0204	TR 2SD1012-F-SPA
or	405 021 0600	TR 2SD1012-G-SPA
or	405 033 6706	TR 2SD1468S-R
or	405 033 6805	TR 2SD1468S-S
Q4830	405 004 4601	TR 2SA608-F-SPA
or	405 143 6504	TR KTA1267-GR
or	405 004 5103	TR 2SA608-G-SPA
or	405 006 1806	TR 2SA933S-R
or	405 006 1905	TR 2SA933S-S
Q4840	405 000 3103	TR DTC114ES
or	405 109 9204	TR KRC102M-A
Q4851	405 151 4400	TR KTD1303
or	405 021 0204	TR 2SD1012-F-SPA
or	405 021 0600	TR 2SD1012-G-SPA
or	405 033 6706	TR 2SD1468S-R
or	405 033 6805	TR 2SD1468S-S
Q4902	405 143 8706	TR KTC3199-GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
Q4903	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q4904	405 143 8706	TR KTC3199-GR
or	405 011 8500	TR 2SC1740S-R
or	405 011 8609	TR 2SC1740S-S
or	405 017 9600	TR 2SC3330-T
or	405 017 9709	TR 2SC3330-U
Q4951	⚠ 405 095 1701	TR 2SD2061-F
or	⚠ 405 138 6403	TR KTD2058Y
or	⚠ 405 095 1602	TR 2SD2061-E
R4752	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4852	⚠ 402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4941	⚠ 402 081 0205	FUSIBLE RES 27 JA 1/4W
S4950	645 038 7586	SWITCH,PUSH,R/PSW
SA401	411 021 6405	SCR S-TPG BIN 3X8
SA402	411 021 6405	SCR S-TPG BIN 3X8

POWER TRANSFORMER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 320 0505	ASSY,PWB,PT (Only initial)
CN450	614 020 1215	SOCKET,2P
CN451	614 017 8203	TERMINAL BOARD
CN452	614 017 8203	TERMINAL BOARD
CN453	614 309 8447	ASSY,WIRE
or	614 314 4762	ASSY,WIRE
L4591	⚠ 645 038 6053	INDUCTOR,181U
or	⚠ 645 017 8061	INDUCTOR,181M
or	⚠ 645 041 3087	INDUCTOR,180U

EXPLODED VIEW & PARTS LIST(TAPE MECHANISM)

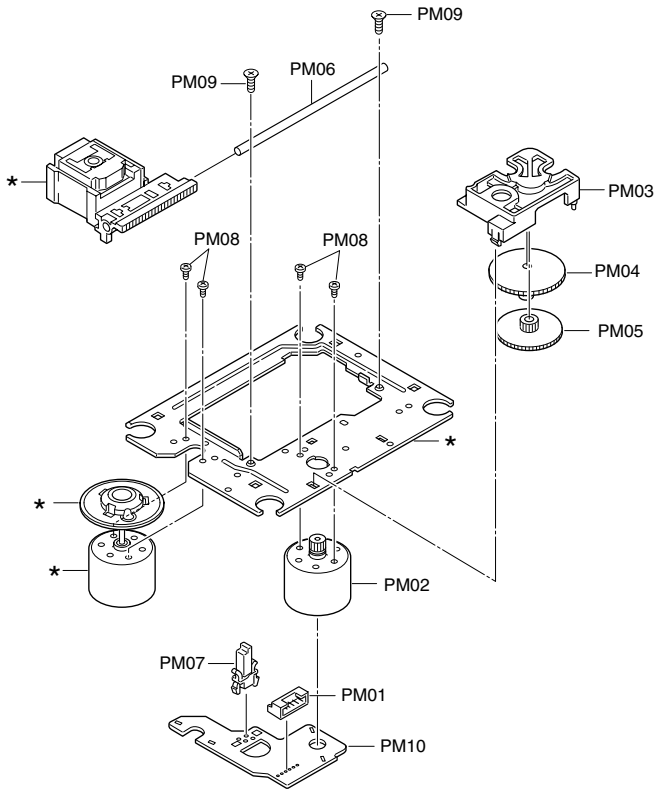


TAPE MECHANISM

REF.NO.	PART NO.	DESCRIPTION
	614 309 7976	ASSY,MECHA,TM-DA70TN-SH
TM01	645 033 8625	E HEAD 6PA
TM02	645 041 3025	R.P HEAD
TM03	645 009 1612	PINCH ROLLER ARM ASSY
TM04	645 009 1766	RF BELT
TM05	645 033 3415	MAIN BELT
TM06	614 312 0629	ASSY,MOTOR,FOR SERVICE

* N.S.P : Not supplied as service parts.

EXPLODED VIEW & PARTS LIST(CD MECHANISM)



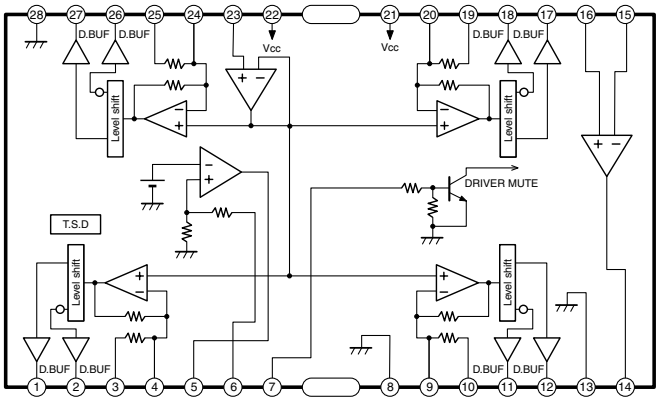
CD MECHANISM

REF.NO.	PART NO.	DESCRIPTION
	614 307 9804	ASSY,MECHA,CDDA11N-SASH
PM01	620 021 8436	PLUG 6P
PM02	620 233 0853	ASSY MOTOR, BASE CHASSIS ASSY
PM03	620 236 3776	COVER,GEAR
PM04	620 230 8753	GEAR MIDDLE,RELAY GEAR
PM05	620 230 8760	GEAR DRIVE
PM06	620 231 0596	SHAFT SLIDE,PICK RAIL
PM07	620 233 0860	SWITCH LEAG,LIMIT SWITCH
PM08	411 104 8401	SCR PAN PCS 2X3
PM09	411 027 5402	SCR S-TPG FLT 2.6X6
PM10	620 236 0836	PWB,MOTOR

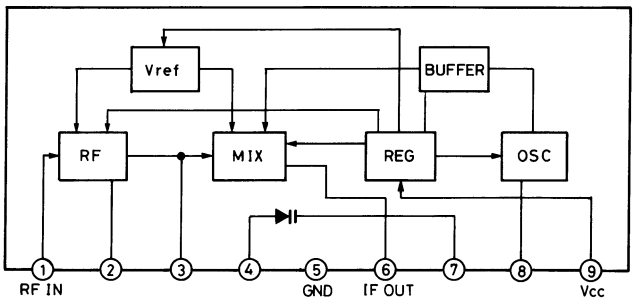
* N.S.P : Not supplied as service parts.

IC BLOCK DIAGRAM & DESCRIPTION

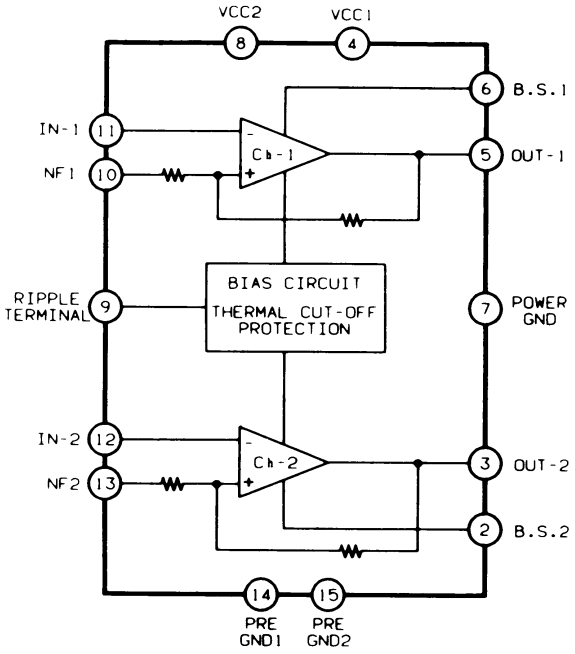
IC103 MM1469XH (CD Driver)



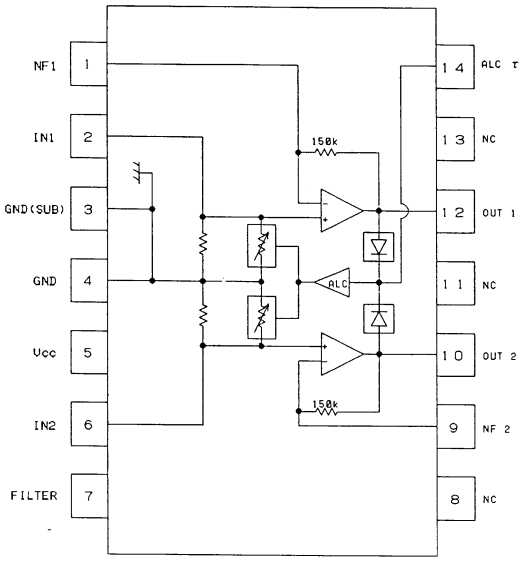
IC201 LA1186N-AUDIO (FM Front End)



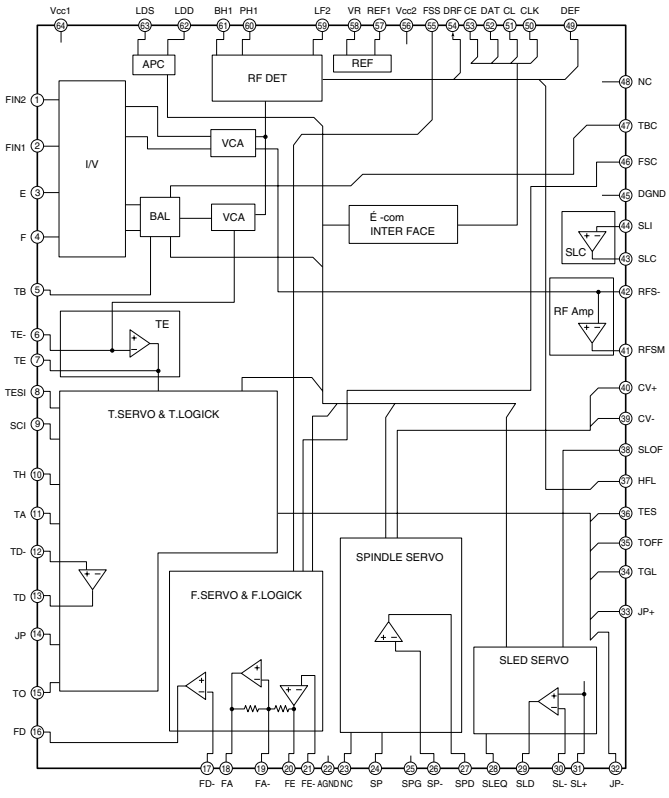
IC412 TA8229K (Power Amplifier)



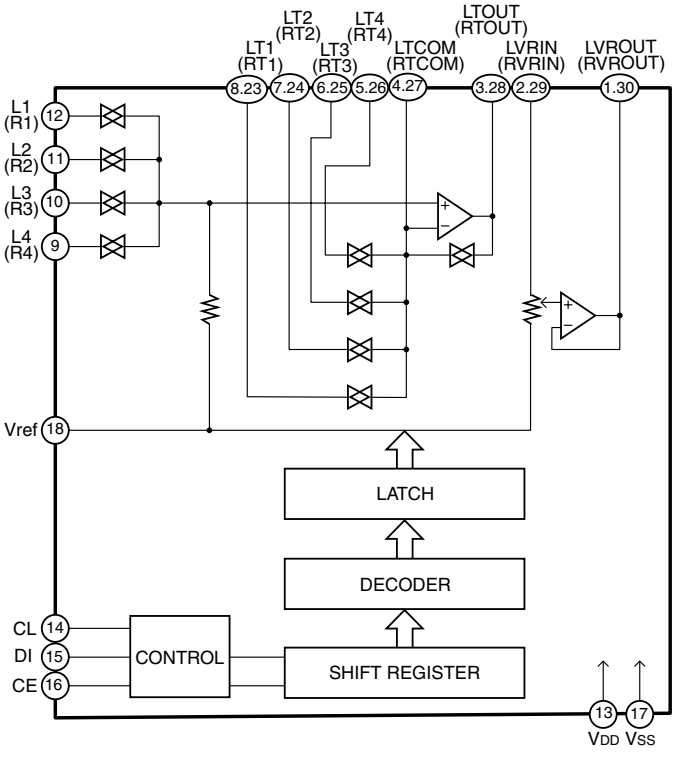
IC410 BA3314F (Dula Preamplifier with ALC Detector)



IC101 LA9241ML (Servo Signal Processor)



IC411 LC75932 (Function & Electric Volume)



IC101 LA9241ML (Servo Signal Processor)

No.	Pin Name	I/O	Function
1	FIN2	I	Connection Pin for Photo Diode of Pickup.
2	FIN1	I	FIN2 + FIN1 = RF, FIN2 - FIN1 = FE
3	E	I	Connection Pin for Photo Diode of Pickup.
4	F	I	E - F = TE
5	TB	I	Input Pin for DC ingredient of TE Signal.
6	TE-	I	Connection Pin for Gain Setting Resistor of TE Signal to TE Signal Pin.
7	TE	O	Output Pin for Tracking Error Signal.
8	TESI	I	Input Pin for Track Error Sense Comparator. TE Signal through Band Pass, and Inputted.
9	SCI	I	Input Pin for Shock Detection.
10	TH	I	Connection Pin for Time Constant Setting of Tracking Gain.
11	TA	O	Output Pin for TA Amplifier.
12	TD-	I	Connection Pin for Constant Tracking Phase Compensation, Consist of between TD and VR.
13	TD	I	Connection Pin for Constant of Tracking Phase Compensation.
14	JP	I	Connection Pin for Amplitude Setting of Tracking Jump (Kick Pulse) Signal.
15	TO	O	Output Pin for Tracking Control Signal.
16	FD	O	Output Pin for Focusing Control Signal.
17	FD-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD and FA.
18	FA+	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FD- and FA-.
19	FA-	I	Connection Pin for Constant of Focusing Phase Compensation, Consist of between FA and FE.
20	FE	O	Output Pin for Focusing Error Signal.
21	FE-	I	Connection Pin for Gain Setting Resistor of FE Signal to FE Signal Pin.
22	AGND	-	Ground for Analog Signal.
23	NC	-	No Connect
24	SP	O	Output Pin for Single End of Input Signal of the CV+, CV- Pin.
25	SPG	I	Connection Pin for Gain Setting Resistor, when Spindle 12 cm Mode.
26	SP-	I	Connection Pin for Constant of Spindle Phase Compensation with SPD Pin.
27	SPD	O	Output Pin for Spindle Control Signal.
28	SLEQ	I	Connection Pin for Constant of Sled Phase Compensation.
29	SLD	O	Output Pin for Sled Control Signal.
30	SL-	I	Input Pin for Sled Signal from Micro Processor.
31	SL+	I	

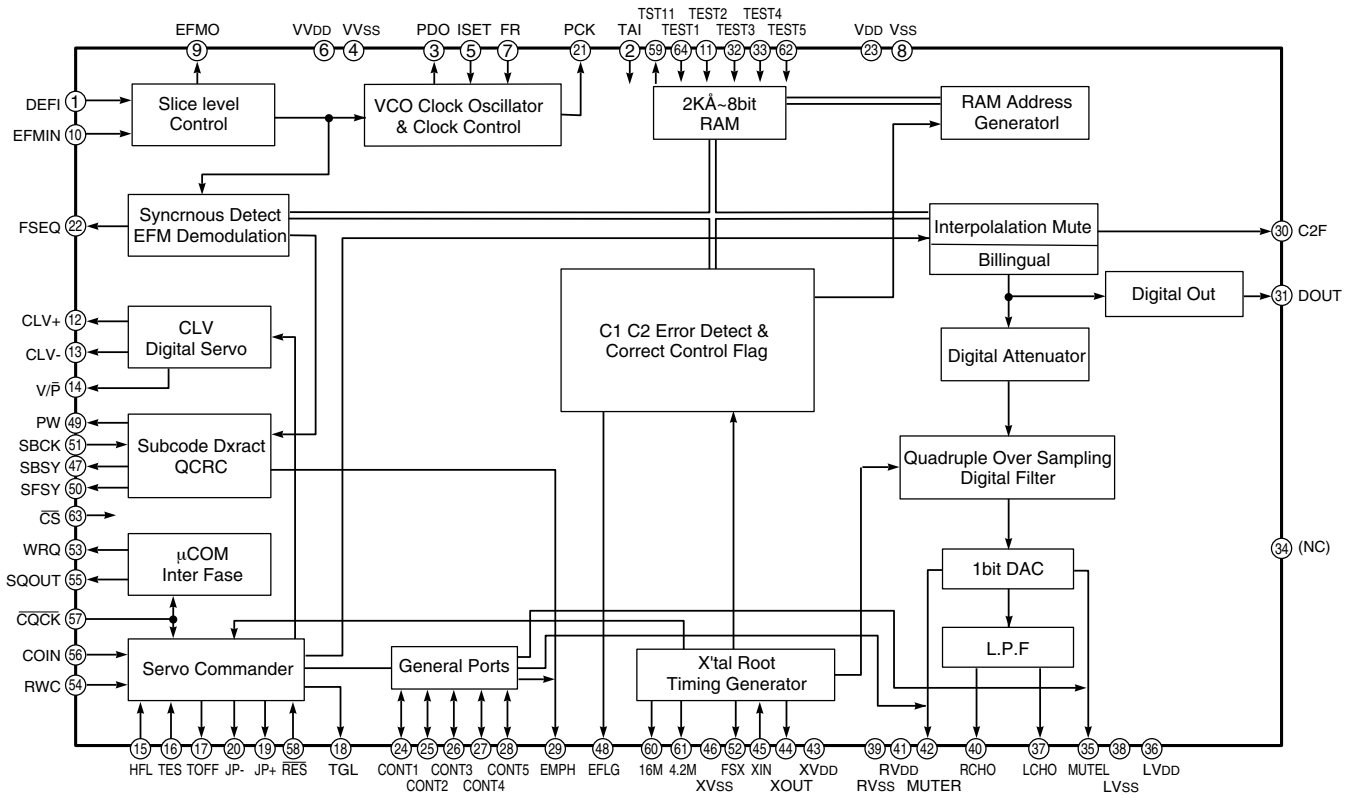
No.	Pin Name	I/O	Function
32	JP-	I	Input Pin for Tracking Jump Signal from Digital
33	JP+	I	Signal Processor.
			Digital Signal Processor. TGL = H : Gain Low
35	TOFF	I	Input Pin for Tracking Off Control Signal from Digital Signal Processor. TOFF = H : OFF
36	TES	O	Output Pin for Track Error Sense Signal to Digital Signal Processor.
37	HFL	I	High Frequency Level Signal Use Detection Main-Beam Position is on the pit or mirror.
38	SLOF	I	Input Pin for Sled Servo Off Control.
39	CV-	I	Input Pin for Constant Linear Velocity Error
40	CV+	I	Signal from Digital Signal Processor.
41	RFSM	O	Output Pin for RF Signal.
42	RFS-	I	Connection Pin for Gain Setting of RF and Constant Setting of 3T Compensation of the EFM Signal with RFSM Pin.
43	SLC	O	Slice Level Control Signal is Output Pin. It Control Level of Data-Slice by Digital Signal Processor of the RF Waveform.
44	SLI	I	Input Pin for Level Control of Data-Slice by Digital Signal Processor.
45	DGND	-	Ground for Digital Signal.
46	FSC	O	Output Pin for Focus Search Smooth Condenser
47	TBC	O	Connection Pin for Variable Range Setting of EF Balance.
48	N_	-	No Connect
49	DEF	O	Output Pin for Defect Detection of Disc.
50	CLK	I	Input Pin for Reference Clock Pulse. (4.23 MHz of Digital Signal Processor)
51	CL	I	Input Pin of Clock Pulse for Command from Micro Processor.
52	DAT	I	Input Pin of Data for Command from Micro Processor.
53	CE	I	Input Pin of Chip Enable for Command from Micro Processor.
54	DRF	O	Output Pin for Detect of RF Level.
55	FSS	I	Select Pin for Focus Search Mode
56	VCC2	-	VCC for Servo and Digital Root.
57	REFI	I	Bus Control Connection Pin for Reference Voltage.
58	VR	O	Output Pin for Reference Voltage.
59	LF2	I	Connection Pin for Time Constant Setting of Detect Detection of the Disc.
60	PH1	I	Capacitor Connection Pin for Peak-hold of RF Signal.
61	BH1	I	Capacitor Connection Pin for Bottom-hold of RF Signal.
62	LDD	O	Output Pin of APC (Automatic Power Control) Circuit.
63	LDS	I	Input Pin of APC (Automatic Power Control) Circuit.

IC BLOCK DIAGRAM & DESCRIPTION

IC102 LC78622NE (Digital Signal Processor)

No.	Pin Name	I/O	Function
1	DEFI	I	Input terminal for detect signal of defect
2	TAI	I	Input terminal for test.
3	PDO	O	The phase comparison output terminal for external VCO control.
4	VVSS	-	Ground terminal for built-in VCO
5	ISET	I	Resistance connection terminal for electric current adjustment of PDO output.
6	VVDD	-	Built-in VCO power supply terminal.
7	FR	I	VCO frequency range adjustment.
8	VSS	-	Ground for Digital
9	EFMO	O	EFM signal output terminal for slice level control.
10	EFMIN	I	EFM signal input terminal for slice level control.
11	TEST2	I	TEST pin. Normal time is non connection.
12	CLV+	O	Output terminal for Disc motor control.
13	CLV-	O	Output terminal for Disc motor control.
14	V/P	O	Change of rough servo / phase control Rough servo : "H", Phase control : "L"
15	HFL	I	Input terminal of track search signal.
16	TES	I	Input terminal of tracking error signal.
17	TOFF	O	Output terminal of tracking off.
18	TGL	O	Output terminal for change of tracking gain.
19	JP+	O	Output terminal for tracking jump control.
20	JP-	O	Output terminal for tracking jump control.
21	PCK	O	Clock monitor output terminal for EFM data playback. (4.3218 MHz)
22	FSEQ	O	Output terminal for detect of SYNC signal.
23	DVDD	-	+5V
24	CONT1	I/O	
25	CONT2	I/O	This output can control at serial control from
26	CONT3	I/O	micro processor.
27	CONT4	I/O	
28	CONT5	I/O	
29	EMPH	O	Output terminal of de-emphasis monitor . "H" : de-emphasis
30	C2F	O	Output terminal of C2 flag
31	DOUT	O	Output terminal of digital out

No.	Pin Name	I/O	Function
32	TEST3	I	Test pin.
33	TEST4	I	Test pin.
34	NC	-	Non connection.
35	MUTEL	O	Mute output terminal for L-ch
36	LVDD	-	Power supply for L-ch
37	LCHO	O	Output terminal for L-ch
38	LVSS	-	GND for L-ch
39	RVSS	-	GND for R-ch
40	RCHO	O	Output terminal for R-ch
41	RVDD	-	Power supply for R-ch
42	MUTER	O	Mute output terminal for R-ch
43	XVDD	-	Power supply of crystal oscillation
44	XOUT	O	Connection terminal of crystal oscillation (16.9344MHz)
45	XIN	I	Connection terminal of crystal oscillation (16.9344MHz)
46	XVSS	-	GND of crystal oscillation
47	SBSY	O	Output terminal for synchronizing signal of sub-cord block
48	EFLG	O	Output terminal for correction monitor of C1, C2, Single and Double
49	PW	O	Output terminal for sub-cord of P, Q, R, S, T, U and W
50	SFSY	O	Output terminal for synchronizing signal of sub-cord frame
51	SBCK	I	Input terminal for readout clock of sub-cord
52	FSX	O	Output terminal of Synchronizing signal (7.35kHz)
53	WRQ	O	Output terminal for standby of sub-cord Q output
54	RWC	I	Input terminal of read / write control
55	SQOUT	O	Output terminal of sub-cord Q
56	COIN	I	Input terminal of command from micro processor
57	CQCK	I	Clock input for reading sub-cord from SQOUT
58	RES	I	Reset (turn on : L)
59	TST11	O	Test pin
60	16M	O	16.9344MHz
61	4.2M	O	4.2336MHz
62	TEST5	I	Test pin
63	CS	I	Chip select terminal
64	TEST1	I	Test pin

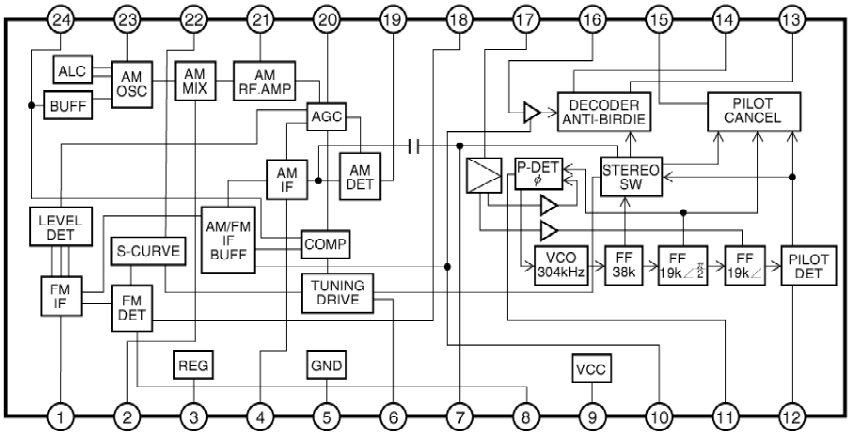


IC BLOCK DIAGRAM & DESCRIPTION

IC601 LC72336-9A38 (Micro Processor)

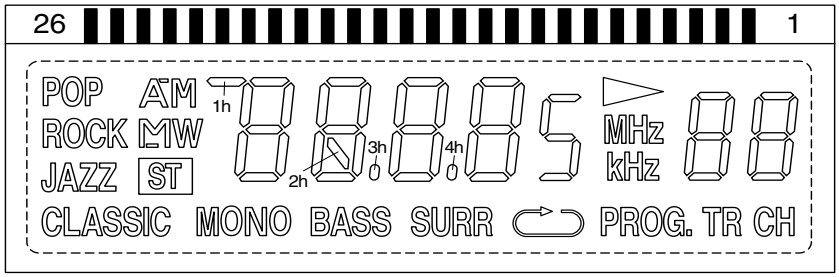
MICOM NAME	PIN NO.	I/O	NAME	FUNCTION
XIN	1	I		Connection terminal of crystal oscillation (4.5MHz)
TEST2	2	I		GND.
PG3(S10)	3	I	CD IDATA	CD MECA Communcation Line
PG2(SO0)	4	O	CD ODATA	DSP,ASP Control
PG1(SCLK0)	5	O	CD CLOCK	
PG0	6	O	RWC	RWC Output
PC3	7	O	CD RESET	CD DSP RESET Output
PC2	8	O	Non Connection	
PC1	9	O	Non Connection	
PC0	10	O	Non Connection	
PB3	11	O	Non Connection	
PB2	12	O	BASS BOOST	BASS BOOST Control Output
PB1	13	O	Non Connection	
PB0	14	O	Non Connection	
PA3	15	I	KEY IN	TRNSISTOR/DIODE SW SOURCE Input
PA2	16	I	KEY IN	TRNSISTOR/DIODE SW SOURCE Input
PA1	17	I	WRQ	WRQ Input
PA0	18	I	DRF	DRF Input(H-DL CHATTERING TIME 50MS)
PK3	19	I	JOG VR2	JOG VR Input(CHATTERING TIME 3MS)
PK2	20	I	JOG VR1	Phase Input
PK1	21	I	PICK-INSIDE	PICK-INSIDE Input
PK0(INT0)	22	I	REMOCON Input	REMOCON Input
PN3	23	O	B2	BAND Output
PN2	24	O	B1	
PN1	25	O	MUTE	AUDIO MUTE Output
PN0	26	O	MONO	Compalsion MONO Output
PM3	27	I/O	F1	FUNCTION Input/Output(CHATTERING TIME 40MS)
PM2	28	I/O	F2	
PM1	29	I	STIN	STEREO Input(CHATTERING TIME 40MS)
PM0	30	I	SYNC REC	SYNC REC Input(CHATTERING TIME 40MS)
VDD	31	-	POWER	Power supply
PE3	36	I	SD	SD Input
PE2	37	I	Non Connection	
PE1(S18)	38	O	SEGMENT Output	Display SEGMENT Output
PE0(S17)	39	O	SEGMENT Output	
S21~S24	32~35	O	SEGMENT Output	
S1~S16	40~55	O	SEGMENT Output	
COM3	56	O		
COM2	57	O		
COM1	58	O		
Vdd2	59	I		
Vdd1	60	I		
PJ3	61	O	Non Connection	
PJ2	62	O	VOL CE	VOL IC Control Output
PJ1	63	O	VOL DATA	
PJ0	64	O	VOL CLOCK	
AD0	65	I	AD KEY:AD0	Operating KEY Input
AD1	66	I	AD KEY:AD1	
AD2	67	I	AD KEY:AD2	Destination Input
AD3	68	I	AD KEY:AD3	BASS-X LID SW Input(CHATTERING TIME 40MS)
HOLD	69	I	HOLD	BACK UP MODE Control Outpu
RCTR	70	I	FMIF	
LCTR	71	I	AMIF	
SNS	72	I	Non Connection	
VDD	73	-	POWER	Power supply
FMOSC	74	O		
AMOSC	75	O		
VSS	76	-		Ground
EO1	77	O		
EO2	78	O	Non Connection	
TEST1	79	-		Ground
XOUT	80	O		Connection terminal of crystal oscillation (4.5MHz)

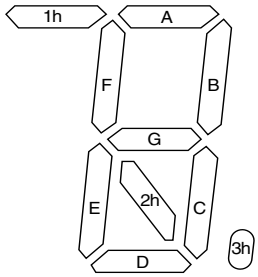
IC211 LA1844ML (Tuner System)

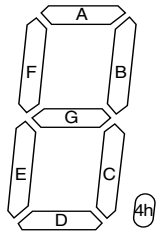


LCD DISPLAY DESCRIPTION

LCD60

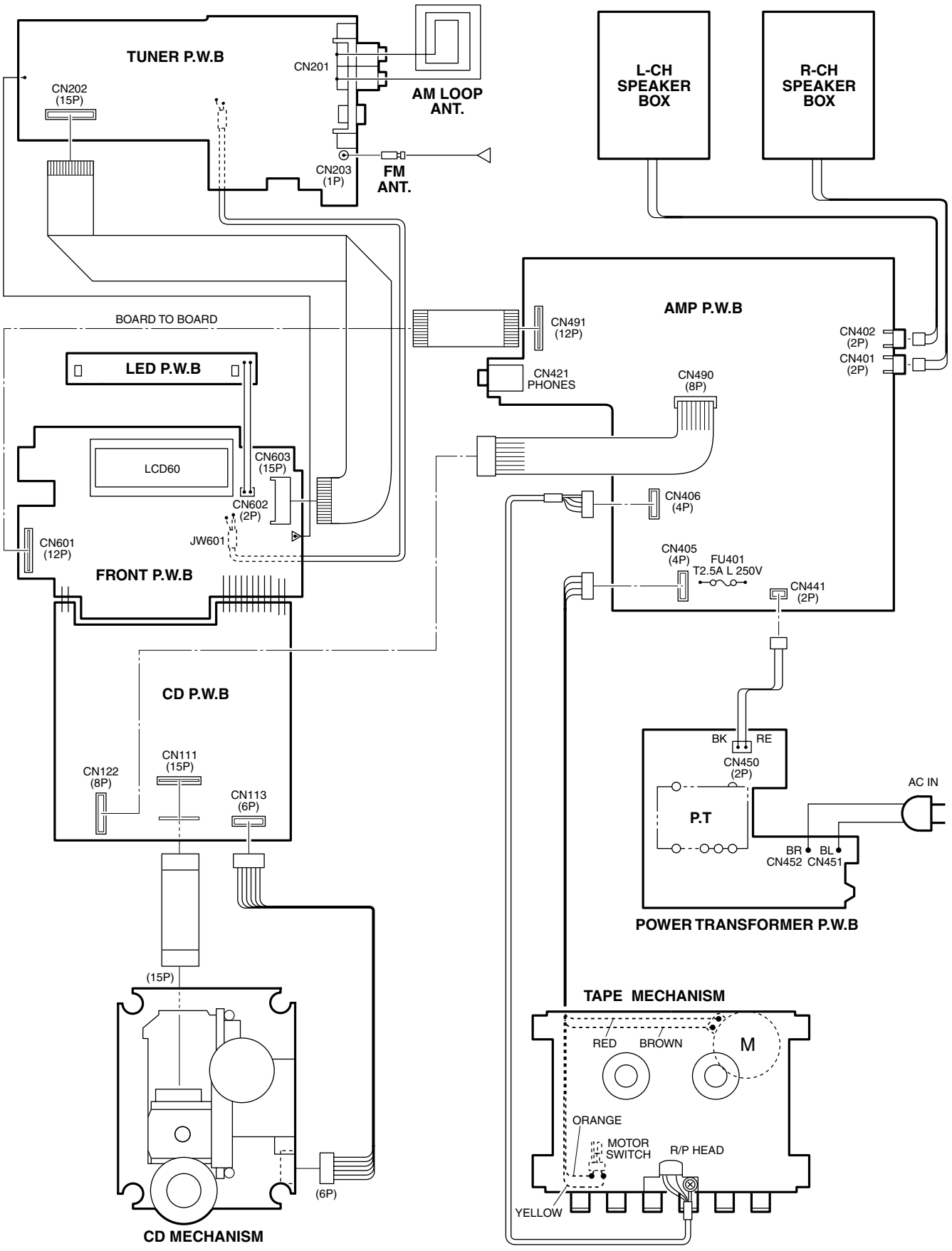






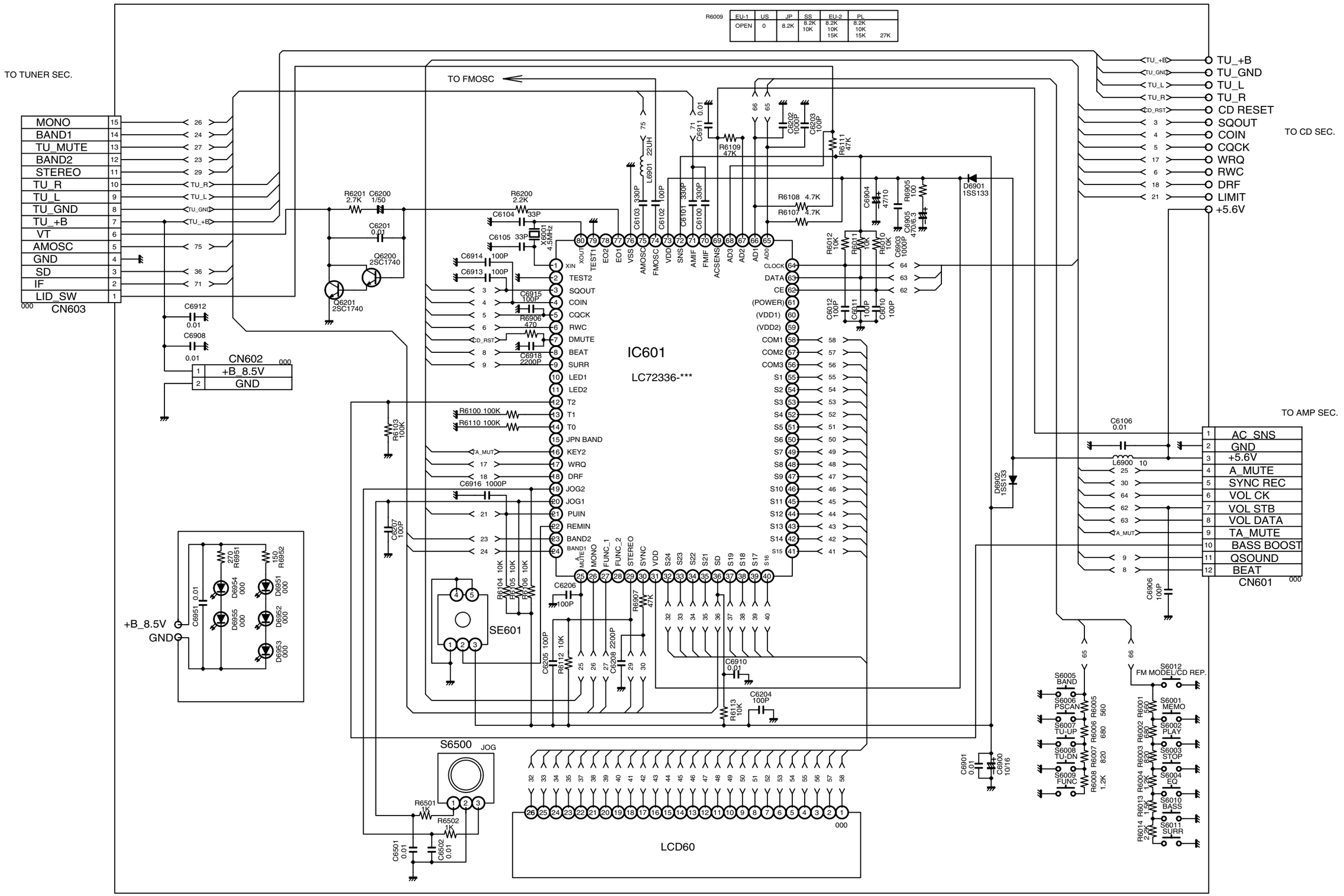
PAD NO.	IC NO.	COM1	COM2	COM3
1	C1	COM1	--	--
2	C2	--	COM2	--
3	C3	--	--	COM3
4	S1	7A	7F	7E
5	S2	7B	7G	7D
6	S3	ROCK	7C	CH
7	S4	6A	6F	6E
8	S5	6B	6G	6D
9	S6	JAZZ	6C	TR
10	S7	T1	MHZ	kHZ
11	S8	5	PROG.	BASS
12	S9	T5	T6	ST
13	S10	4A	4F	4E
14	S11	4B	4G	4D
15	S12	4h	4C	T8
16	S13	3A	3F	3E
17	S14	3B	3G	3D
18	S15	3h	3C	SURR
19	S16	2A	2F	2E
20	S17	2B	2G	2D
21	S18	2h	2C	MONO
22	S19	T2	T4	T7
23	S21	POP	T3	--
24	S22	1A	1F	1E
25	S23	1B	1G	1D
26	S24	1h	1C	CLASSIC

WIRING CONNECTION

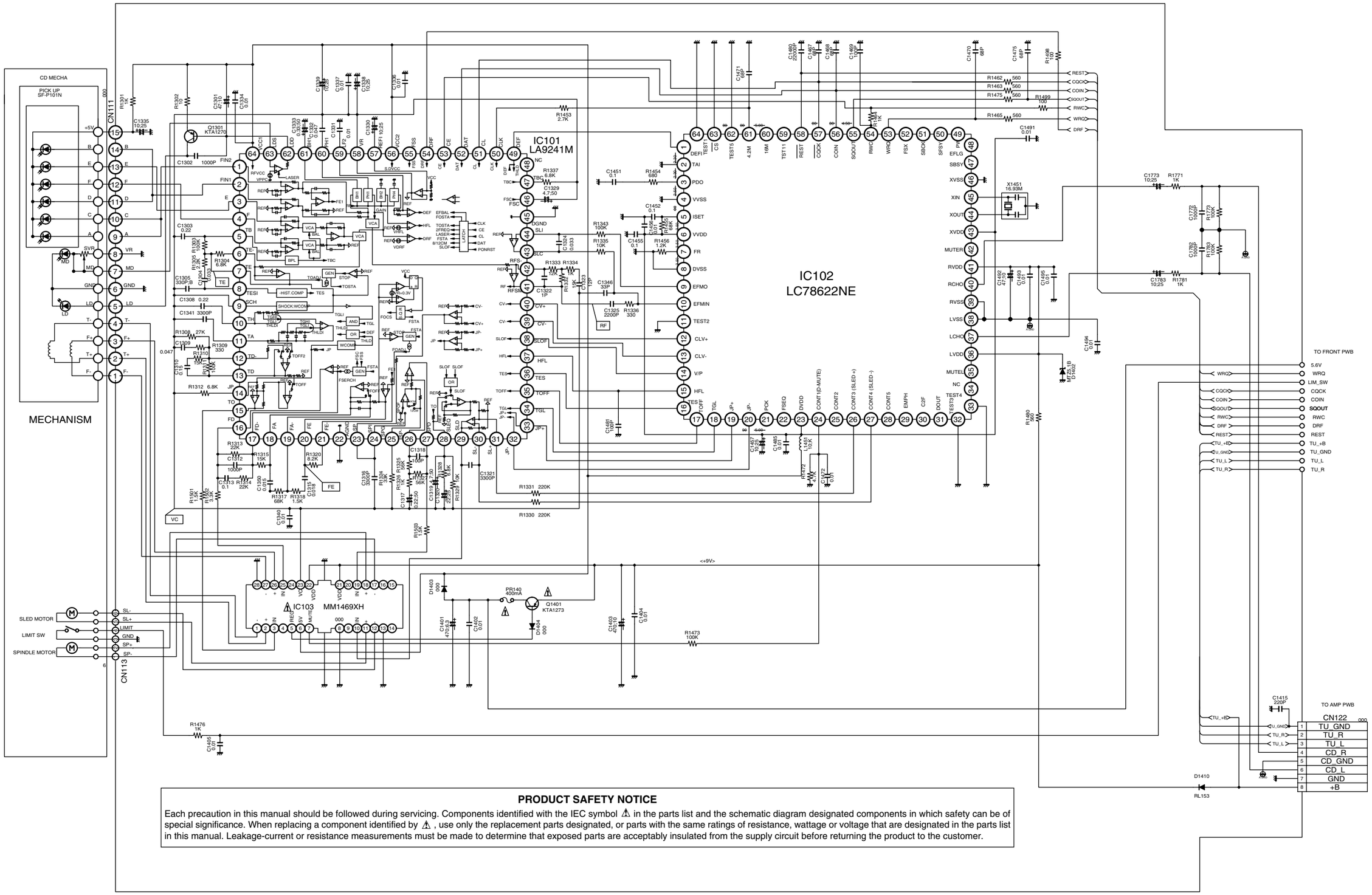


This is a basic wiring diagram.

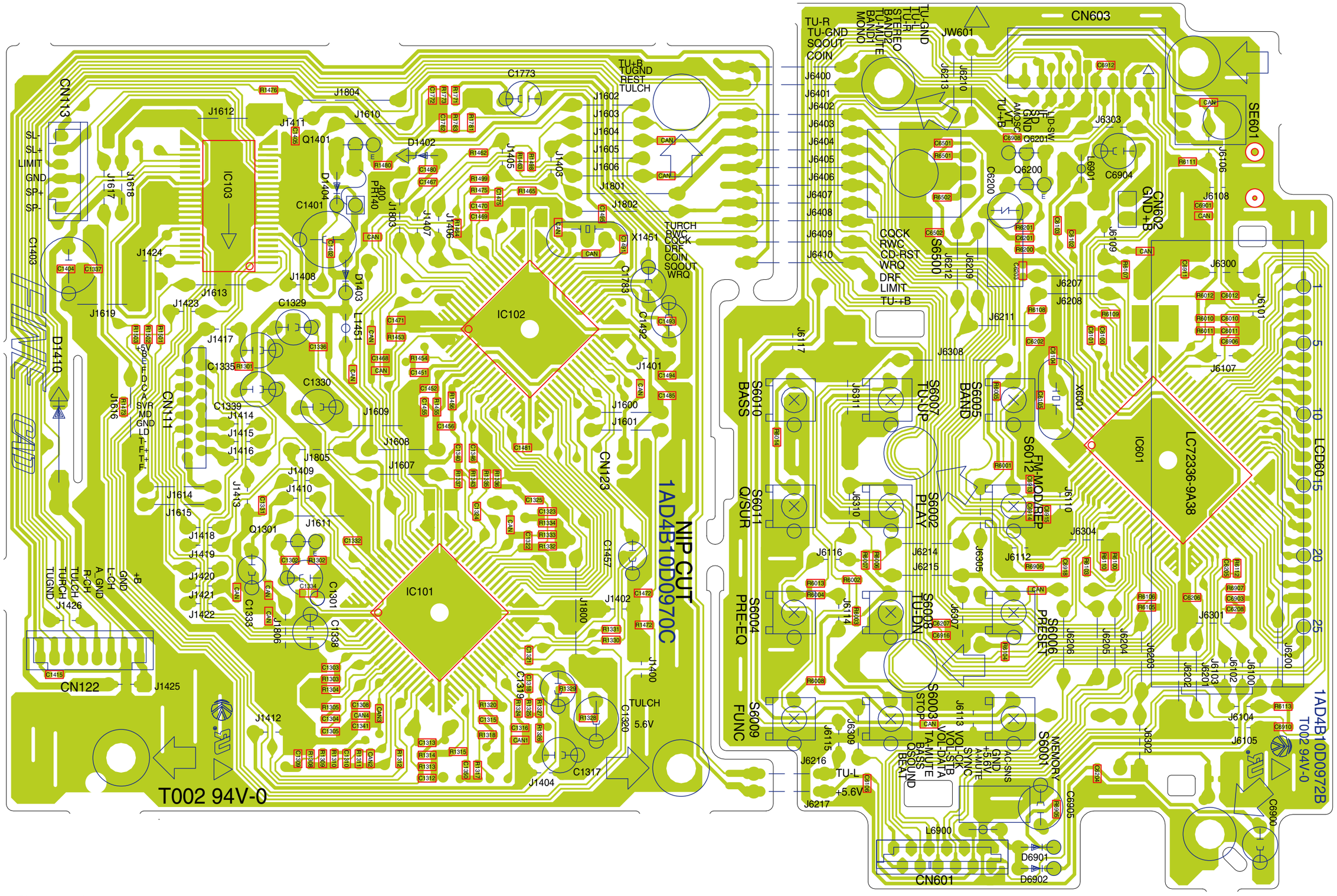
SCHEMATIC DIAGRAM (FRONT)



This is a basic schematic diagram.

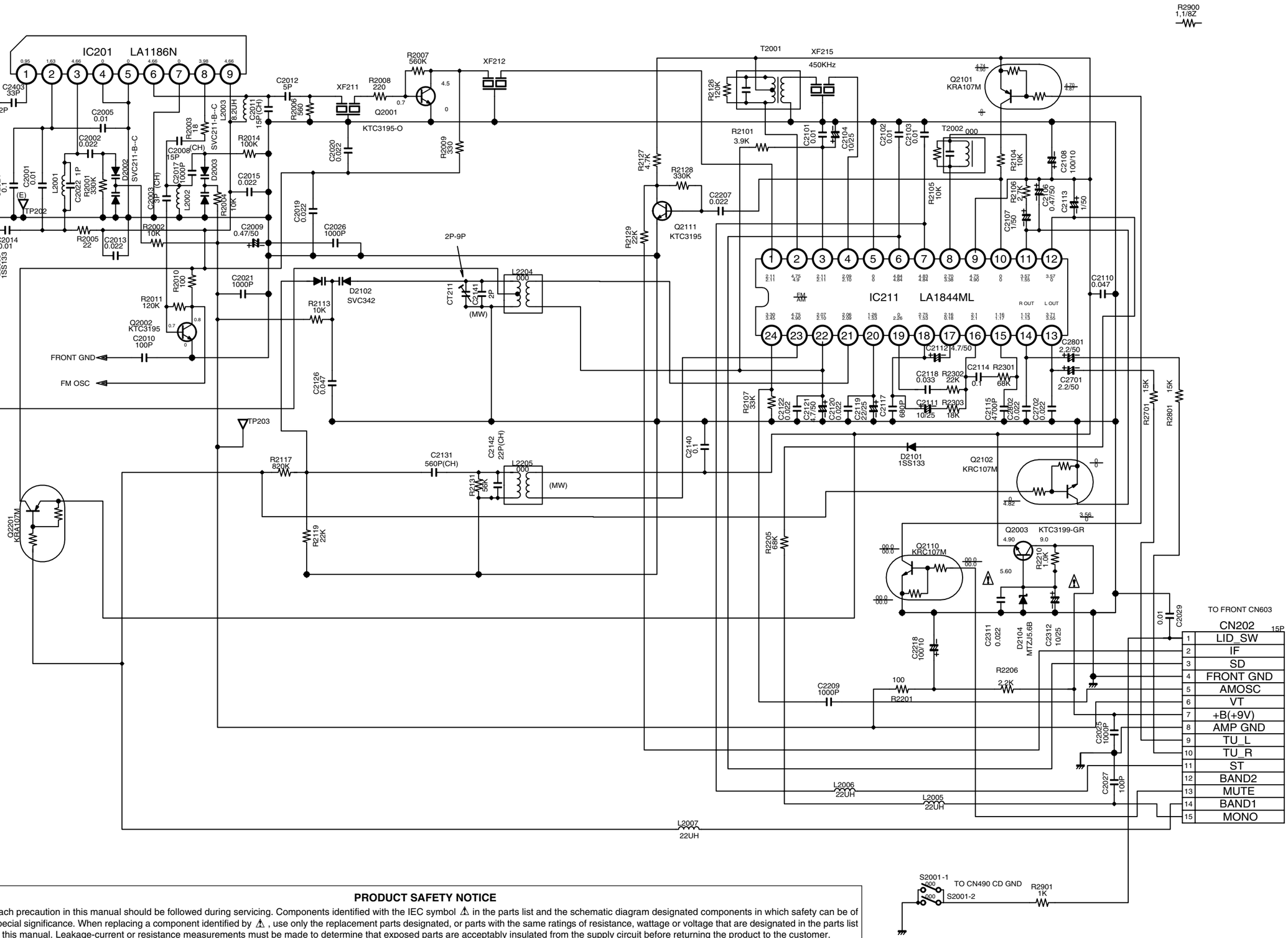


This is a basic schematic diagram.



This is a basic wiring diagram.

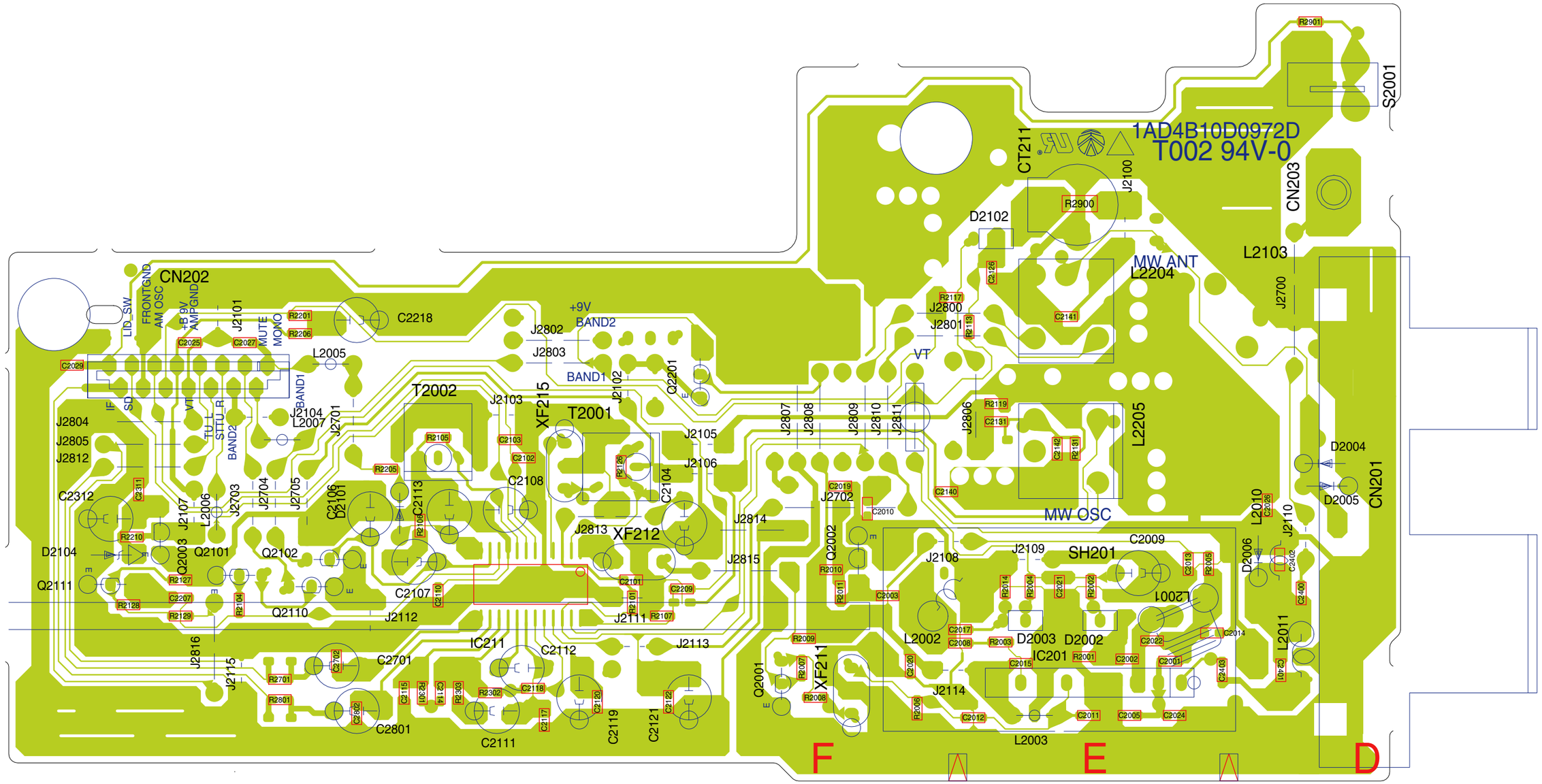
SCHEMATIC DIAGRAM (TUNER)



PRODUCT SAFETY NOTICE

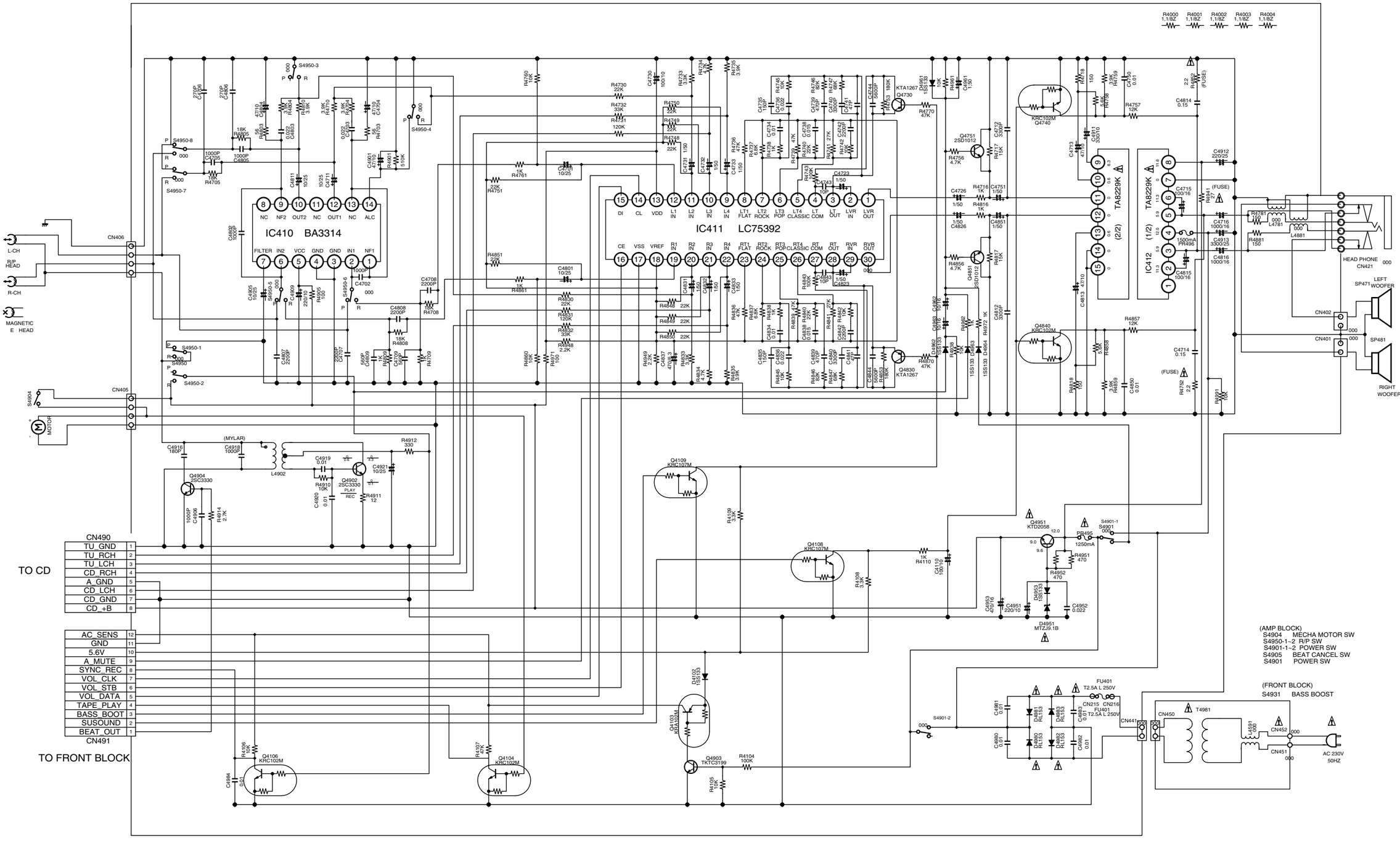
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designated components in which safety can be of special significance. When replacing a component identified by ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

This is a basic schematic diagram.



This is a basic wiring diagram.

SCHEMATIC DIAGRAM (AMPLIFIER)



This is a basic schematic diagram.

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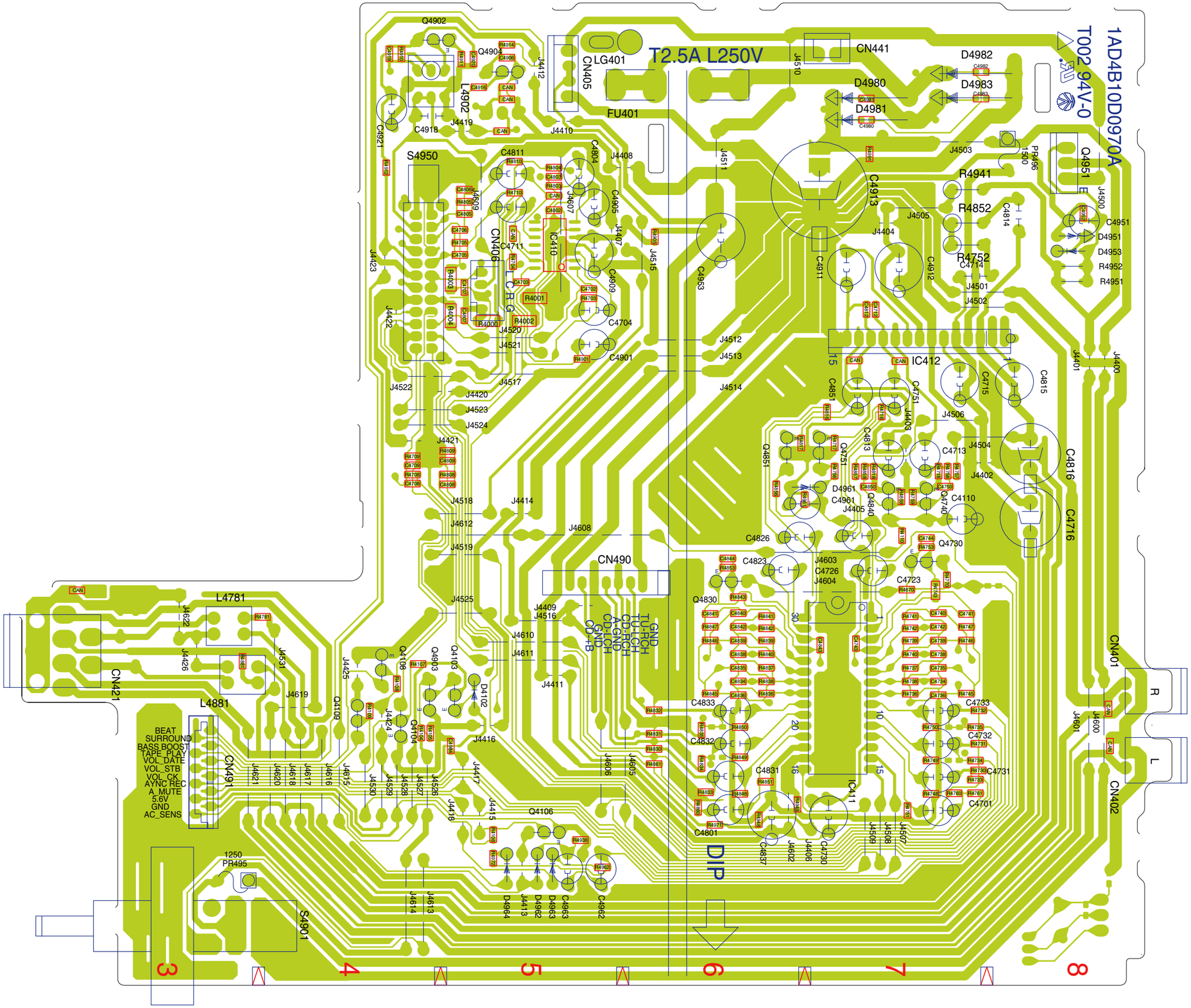

This is a basic wiring diagram.

Notice

SANYO

V	CORRECTION		PRODUCTION CHANGE
	SERVICE FLASH		ADD INFORMATION

FILE NO.

Please add this notice to the Service Manual listed below.

Category : **Micro Component System** **Date :** **May, 2002**

Model : **DC-DA90**

Destination : **SP** **Reference No. :** **SM5810260** **Issue Number :** **1**

The reason of change.

A : Misprint B : Quality Reliabilities C : Standardization

D : Design E : F :

G :

NOTE: Interchangeability
Key : 1=Old part to New unit
2=New part to Old unit

The following changes have been made in the products listed above model.

Page & Section	Ref. No.		Part No.	Description	Q'ty	Interchangeability	Reason
P10 IC Block Diagram		Old		LC75932	1		A
		New		LC75392	1		

Prod. Cord : 129 620 02

Notice

SANYO

☐	CORRECTION	☑	PRODUCTION CHANGE
☐	SERVICE FLASH	☐	ADD INFORMATION
☐		☐	

FILE NO.

Please add this notice to the Service Manual listed below.

Category : Micro Component System **Date : Jun. 2002**

Model : DC-DA90

Destination : SP **Reference No. : SM5810260** **Issue Number : 2**

Page4 TUNER ADJUSTMENTS

Old

1. FM

Step	Adjusting Circuit	Connection Input	Connection Output	SG Frequency	Adjustment	Remark
1	IF(0V) Adjustment	FM Antenna SG=66dBuV	Alignment voltage IC211 3-22pin(TP24,25) is 0.0±0.05V	98.0MHz	T2002	Alignment voltage IC211 3-22pin is 0.0±0.05V
2	Cover Voltage	---	Connect Digital DC voltmeter to	***90.0MHz***	L2002	1.00±0.05V
		---	TP11(H), TP12(E).	108.0MHz		5.50±0.20V check only

New

1. FM

Step	Adjusting Circuit	Connection Input	Connection Output	SG Frequency	Adjustment	Remark
1	IF(0V) Adjustment	FM Antenna SG=66dBuV	Alignment voltage IC211 3-22pin(TP24,25) is 0.0±0.05V	98.0MHz	T2002	Alignment voltage IC211 3-22pin is 0.0±0.05V
2	Cover Voltage	---	Connect Digital DC voltmeter to	***87.5MHz***	L2002	1.00±0.05V
		---	TP11(H), TP12(E).	108.0MHz		5.50±0.20V check only

Page7 PARTS LIST

Section	Ref. No.		Part No.	Description	Q'ty	Interchang-ability
FRONT P.W.BOARD ASSY	S6500	Old	645 043 6253	SWITCH, ROTARY(ENCODER)	1	
	S6500	New	645 054 1247	SWITCH, ROTARY(ENCODER)	1	

Prod. Code : 129 620 02